```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          September 12, 2004, 19:48:00 ; Search time 4444.98 Seconds (without alignments)
16274.436 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3470272 segs, 21671516995 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDENTITY NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb or: *
gb ro: *
gb sy: *
gb sy: *
gb win: *
gb win: *
em fun: *
em mu: *
em or: *

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gb_om:*
em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6940544
```

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

REF F	SOU SOUS SUBS	VER	RESULT 1 AX592444 LOCUS DEFINITION		n	იი									Ω				Ω		a		O			c	1						Result No.
FERENCE AUTHORS TITLE	RCE RGANI	SION	ULT 1 92444 US		44	4 4 2 W	44.	ω 9	3 6	, ω (ω μ 4. π	S	υ 1	30	28	26 27	25	2 2	21 22	225	ப ப 8	17	2 7 2	14	12	11	ωc					2	No.
		PP	ğ Ş Ş		09 T	129.4	2 2	ש מי	78	80		83 F	86	12.	57.		57.	2 22	\circ	9 6	γ 0 υ			9	oφ	838.	013.	. 4	113	N o	146	9 0	Score
	Homo sap Homo sap Eukaryot Mammalia	AX592444 AX592444	K592444		σ, ~	7.7.	ı vo u	10	10		10					15.	15.	17.	, 18.	100	222	30.	37.	39.	47.	50.	л б о .	65.	67.	82.	87.	100.	Quer Matc
mann, M 52874 protei	oiens oiens ca; Me	· .	n 1 fi		24	8 197			1						6	თ		ם ני	18	ŀ	1 2 2		19			18						20.3	h Le
ຶ່ຫ	(hum tazo heri	I:27	P P		ω,	200	441	E 4	ω α	יוטי	40	21	25	on c	2	25	H 44	n Ci	98	200	78	w	507	65	97	87	ა ც ა	656	707	67	<i>4</i> .0	ω	ngth D
- coσ.		505	aten		_							0	0									۰.		_ (0							- L)B
ers,R. 497, and 3 thereof	Chordata; Cran Primates; Cata	Ø	1669 bp t W00232962.	ALIGNMENTS	AC127920	AC146543	AK095482	33606 33606	ME302046	X356083	AX356085 BC036037	MMU542393	RNO535753	575	AC102943	BD116529 AC102943	1R420976	1X817125	AC090087	1K056199	3X640592	BC022579	1C115775	GGA535692	BC030474	C091144	1Y344579	SA53583	SA53583	1SA431184	592446		;
4 2 5	iata; rrhini		DNA									-																					
hods and	Vertebrata; ; Hominidae		linear		AC12			AY06 AX83	AJ30	AX35	AX35 BC03	AJ5	AJ5 AK11	AJ53	AC10	BD11 AC10	AR42	AX81 AK09	\$000 \$000	AKOS	BX32	BC0	AC11 AX31	O C		100	AY34	N C		44 (ıΩ	AX59 BC06	Desc
9	Euteleo; Homo.		PAT 27-		0 Rat	ര	Hom	on to	9 9	. ω . ω	7 01	9	- 0	5752 Gallus	, w	3 HC	. 01	01 01	7 #	- w	5 Dan	79	Sec	Gall	4 4	, ,,,,	4579 Bos . 7838 Homo	Ho	HOM	1184 Homo	,, 01	10 10	ription
ons of	stomi;		27-JAN-2003		tus no	eros	gap	phi ee	sophil	ence	a c	ยนเ	i g	10 E	Je i		quence	Sequence Homo sapi	sapi	Sapı	o re	านธ	muscu	us ga		sapi						ence sapi	

```
В
                                                   Š
                                                                                  밁
                                                                                                     8
                                                                                                                                  밁
                                                                                                                                                                Ş
                                                                                                                                                                                             멍
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 1669; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                             109
                                                       601
                                                                                   541
                                                                                                            541
                                                                                                                                        481
                                                                                                                                                                   481
                                                                                                                                                                                                421
                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent: WO 0232962-A 1 25-APR-2002;
Millennium Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                             GCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTT
 CATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
                                                                                                     AGCTACCCCATTATGCTCTGGTGGTCCCCCGCTGACGGGGGGAGACTGGGGAGGTTAGGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACGCGTCCGCTCTGCTGCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT
                             GCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTT
                                                                                  AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                        TTIAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                                                                                                                           TTTAAAAGTTCCAGTTIGCAAGAIGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                TTTTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAAAGCCAATATAATTTCTTACTCCTTCTGGAGTGCTGCTTGGCTTTCACTCAGTGGTTT
                                                                                                                                                                                               AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAA
                                                                                                                                                                                                                                                   AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                                                                               CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAAAGCCAATATAATTTCTTACTCCTTCTGGAGTGCTGGCTTTGGCTTTCACTCAGTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACGCGTCCGCTCTGCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; S
Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/protein_id="CAD62017.1"
/bycotein_id="CAD62017.1"
/db_xref="G1:27950547"
/db_xref="G1:27950547"
/db_xref="G1:27950547"
/db_xref="G1:27950547"
/db_xref="G1:27950547"
/db_xref="RewrremB1:CAD62017"
/db_xref="MKVTGPPQGVTDSNQCFNDQWFLSNTRSSEHIKEVMVELGKFER
/translation="MKVTGPPQGVTDSNQCFNDQWFLSSYPILMWS9LTGSTG
/KEFKSSLQOGHTKWEEAPTLMSFLKKEGLTPNRKEKWELDSYPILVENGSPKNALFESPK
NNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRL
APLYVVQSDCDP93DRDSYVRELMTYLEVDSYGECLENKLLPQQLKNPASMDADGFYR
IAQYKFILAFENAVCDDYITEKFWRPLKIGUVPVYYGSPSITDWLPSNKSAILVSEF
SHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLTTALERKWGVQDVNQDNYID
AFECMVCTKVWANIRLQBKGLPPKRWEAEDTHLSCPEPTVFAFSPLRTPPLSSLREMW
ISSFEQSKKEAQALRWLYDRNQNFSSQEFWGLVFKD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol type="unassigned DNA"
/db xref="taxon:9606"
163. .1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1669;
Pred. No. 0;
O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                      660
                                                                                  600
                                                                                                            600
                                                                                                                                                                 540
                                                                                                                                                                                               480
                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                    360
                             660
                                                                                                                                        540
                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
 RESULT 2
BC063462
LOCUS
DEFINITION
ACCESSION
                                                                                                                  Ó
                                                                                                                                                    밁
                                                                                                                                                                       δδ
                                                                                                                                                                                                         В
                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                               덩
                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               성 유
                                                                                                                                                    1561
                                                                                                                                                                                                          1501
                                                                                                                                                                                                                                     1501
                                                                                                                                                                                                                                                                 1441
                                                                                                                                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                               1621
                                                                                                                                                                                                                                                                                                                                                                                                      1321
                                                                                                                                                                                                                                                                                                                                                                                                                                  1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
BC063462
Homo sapiens o
BC063462
                                                                                                              CTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGGGGCCCTAGTATTCAAGGAC
                                                                                               CTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGAC
                                                                                                                                                                                                          TGCCCAGAGCCCACAGTGTTTGCCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                                                                                    TGCCCAGAGCCCACAGTGTTTGCTTTTCTCACCACCTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                                                                                                                       AGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                                                                                                                      AGGCTTCAGGAAAAGGCCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                                                                                                                                                            CAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATC
                                                                                                                                                                                                                                                                                                                                                                                           CAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGGAAATGGGGGAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGTAGTCCCTGTATATTACGGATCCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTGAGAAATGCAGTTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCCACTGAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCGCTGGTATGTACAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCACTAACTACCCAATACTTGGAGAGACTTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATARACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
             3610 bp
cDNA clone MGC:74714
           mRNA linear PRI 11
IMAGE:5198060, complete
                           PRI 11-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                1620
                                                                                                                                                                                                            1560
                                                                                                                                                                                                                                     1560
                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                             1500
                                                                                                                                                                                                                                                                                                                                                1440
                                                                                                                                                                                                                                                                                                                                                                            1380
                                                                                                                                                                                                                                                                                                                                                                                                      1380
                                                                                                                                                                                                                                                                                                                                                                                                                                  1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                       1620
                                                                                                                                                                                                                                                                                                                       1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
```

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                    SGS
                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Butherla; Filmdees; Carcallini; Domaince, Description (1988) 1 (Dases 1 to 3610)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Klausner, R.D., Collins, F.S., Wagner, L., Schaefer, C.F., Bhat, N.K., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Fatmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninoi, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Wockernan, K.J., Malek, J.A., Gayit, J.J., Hulyk, S.W., Worley, K.G., Hale, S., Garcia, A.M., Gayit, J.J., Hulyk, S.W., Villaion, D.K., Muzny, D.M., Sodergren, E.J., Lu, Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Wadan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalaka, U., Smailus, D.E., Schnutz, J., Wers, R.M., Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Nat
12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,B.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
Submitted (08-DEC-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                         Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 135 Row: f Column: 2
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 19923647.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BC063462.1 GI:39645816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 3610)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens (human)
                /note="Vector: pCMV-SPORT6"
271. .1836
                                                                                            /tissue type="Brain, adult, 6 pooled whole brains"
/clone_Tib="NIH_MGC_114"
/lab_host="DH10B"
                                                                                                                                                                                                             /db_xref="taxon:9606"
/clone="MGC:74714 IMAGE:5198060"
                                                                                                                                                                                                                                                                                                                                      organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                    .3610
                                                                                                                                                                                                                                                                                                type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
밁
```

/product="Unknown (protein for MGC:74714)" /protein_id="AAH63462.1"

misc_feature /note="Glyco_transf 10; Region: Glycosyltransferase family 10 (fucosyltransferase). This family of Fucosyltransferases are the enzymes transferring fucose from GDP-Fucose to GlcNac in an alphal, 3 linkage. This family is know as glycosyltransferase family 10" /db_xref="CDD:pfam00852" FSSQEFWGLVFKD"

Db	γQ	מט	, Q	Db	γQ	В	Q	Дb	Qy	Db	Qy	рь	Qγ	מם	Qу	Db	Qy	Db	8	Вb	8	90	Qy	Query Match Best Local Matches 151	
5	78 GTT	0 CACAMDAMACHUCHOCHUCHUCHUCHUCHUCHUCHUCHUCHUCHUCHUCHUCHUC	, ,	w	658 TTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCAC 717	811 AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTC 870	598 AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTC 657	751 ACCAAAGCATTCCTCTATGGTACTGACTTTAACATAGATAG	538 ACCAAAGCATTCCTCTTCTATGGTACTGACTTTAACATAGATAG	691 CAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTACCT	478 CAATGTGGAGCAGATGCTTGTTTGTTCACCATCAACCGGACCTACCT	631 GACAGCTACCCCATTATGCTCTGGTGGTCCCCGGTGACGGGGGGGAGGCTGGGAGGTTAGGC 690	418 GACAGCTACCCCATTATGCTCTGGTGGTCCCCGGCTGACGGGGGAGACTGGGGAGGTTAGGC 477	571 CTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTG 630	358 CTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTG 417	511 GAGTTTAAAAGTTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT 570	298 GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT 357	451 ACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAG 510	238 ACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAG 297	391 CCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGCGGCCTTTATCTAAC 450	178 CCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAAC 237	331 TTTCTGCTTGTCACACTCCAGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 390	118 TTTTTTTTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 177	tch 90.2%; Score 1506; DB-9; Length 3610; al Similarity 98.7%; Pred. No. 0; 1518; Conservative 0; Mismatches 20; Indels 0; Gaps 0;	מולד ליווי מולד מולד מולד מולד מולד מולד מולד מולד

```
REFERENCE
AUTHORS
TITLE
                                                              RESULT 3
AX592446
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                              S
                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                             g,
                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                     B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                     1618
                                                                                                                                                                                                                                             1558
                                                                                                                                                                                                                                                                    1711
                                                                                                                                                                                                                                                                                                            1651
                                                                                                                                                                                                                                                                                                                               1438
                                                                                                                                                                                                                                                                                                                                                     1591
                                                                                                                                                                                                                                                                                                                                                                                              1531
                                                                                                                                                                                                                                                                                                                                                                                                                 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                     1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        958
Glucksmann,M.A. and Meyers,R. 80090, 52874, 52880, 63497, and human proteins and uses thereof
                                     Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Primates,
                                                                                                       AXS92446
Sequence 3 from
AXS92446
                                                                                               AX592446.1
                                                                                                                                                                                            GACTGATTTCAAAAATGATCAGAATGAAACAGAAAAAA 1655
                                                                                                                                                                                                                                    TGGCTGGTTGATAGGAATCAAAAACTTTTCATCTCAAGAGTTTTGGGGCCCTAGTATTCAAG
                                                                                                                                                                                                                                                                                                       AGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTC
                                                                                                                                                                               GACTGATTTCAAAAATGATCAGAATGAAACAGACTAGA
                                                                                                                                                                                                                                                             TTGCGAGAGATGTGGATTTTCCAGCTTTGAĄCAATCCAAGAAAGAAGCCCCAGGCACTAAGG
                                                                                                                                                                                                                                                                            ATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTG
                                                                                                                                                                                                                                                                                                                                                                                        AACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGGCCTAGTATTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCCAGGGAACTGGCAAGTTACATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTATATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent
                                                                                                                 1461 bp
WO0232962.
                                       Craniata; Vertebrata;
Catarrhini; Hominidae,
          33425
                                                                                                                           DNA
          methods
                                                                                                                                                                                1868
                                         Hominidae;
                                                                                                                           linear
          and
          compositions
                                        Euteleostomi;
Homo.
                                                                                                                           PAT
                                                                                                                           27-JAN-2003
          ę,
                                                                                                                                                                                                                       1830
                                                                                                                                                                                                                                           1617
                                                                                                                                                                                                                                                                1770
                                                                                                                                                                                                                                                                                    1557
                                                                                                                                                                                                                                                                                                         1710
                                                                                                                                                                                                                                                                                                                             1497
                                                                                                                                                                                                                                                                                                                                                  1650
                                                                                                                                                                                                                                                                                                                                                                     1437
                                                                                                                                                                                                                                                                                                                                                                                           1590
                                                                                                                                                                                                                                                                                                                                                                                                              1377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1410
                                                                                                                                                                                                                                                                                                                                                                                                                                    1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1110
                      Ş
                                          유양망
                                                                                                        Ş
                                                                                                                                   밁
                                                                                                                                                 δ
                                                                                                                                                                      D,
                                                                                                                                                                                            δ
                                                                                                                                                                                                                     B,
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                            Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Simi
Matches 1461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                            1003
                                                 781
                                                                     943
                                                                                         721
                                                                                                               883
                                                                                                                                    199
                                                                                                                                                                                                                      541
                                                                                                                                                       823
                                                                                                                                                                            601
                                                                                                                                                                                                763
                                                                                                                                                                                                                                         703
                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                  643
                                                                                                                                                                                                                                                                                                                             583
                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                       403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent: WO 0232962-A 3 25-APR-2002;
Millennium Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                               CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                        TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC 1062
                                                                                                   CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                 CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                          TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCG
                                                                                                                                                                                                                 AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                        CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                               CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                      TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                           AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                  TTACCTCTGCCTCGGAAAGCCCATCATGACTGGCCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                    TACCTCTCCCTCCGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCCGAAA
                                                                                                                                                                                                                                                                                                                                             ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                   ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAGGAATGACTTGACCTTCAACAGGAAA 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87.5%; Solilarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="unassigned DN/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1461; D; Pred. No. 0; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                        780
                                                                                                             942
                                                                                                                                 72C
                                                                                                                                                      882
                                                                                                                                                                           660
                                                                                                                                                                                              822
                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                          642
                                                                                                                                                                                                                                                                                                                                                                                                                                                    462
                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                       762
                                                                                                                                                                                                                                                                                702
                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                  582
                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                            522
                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

Š

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSA582015
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                    gene
                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              901
                                                                                                           ١
                                                                                                                                                                                                   Direct Submission
Submitted (03-SEP-2003) Oriol R., U504, Inserm,
Vaillant-Couturier, 94807, FRANCE
Splice variants: AJ512465, AJ535839, AJ535838, Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2312 bp mRNA linea
Homo sapiens mRNA for alpha3-fucosyltransferase
AJ582015
                                                                                                                                                                                                                                                                                                                                                                                                  Martinez-Duncker,I., Candelier,J.J., Oriol,R. and Mollicone,R. Cloning, expression and genomic organization of two new human alpha3-fucosyltransferases (FUT10 and FUT11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                   Oriol, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AJ582015.1 GI:34481985
alpha3-fucosyltransferase; FUT10
                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG 1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACCCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA 1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGG 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCTAGTATTCAAGGACTGA 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGCGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 2312)
                    /chromosome="8"
/map="8p11.23"
/clone="479"
i...2312
gene="FUT10"
                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                                                                                                                                                            .2312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear PRI
erase (FUT10 :
                                                                                                                                                                                                                                         AJ431184
                                                                                                                                                                                                                                                                                        16 Av. Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                              Š
                                                                                                                                                                밁
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 1389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polyA_signal
                                                                        1036
               923
                                                                                                                        863
                                                                                                                                                                        976
                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                  916
                                                                                                                                                                                                                                                                                                               743
                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                         796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                             GGTCCCCGCTGACGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                    TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                   TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCACCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                               TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                   GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                        TTAGAAAAAGACTTGCT
                                                                                                                                                                                                                                                               AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id="CAE46499.1"
/db_xref="G1:34401986"
/db_xref="G1:34401986"
/translation="myniqurkilhascicvtaivfilvtloymvelgkferkefksss
/cranslation="myniqurkilhascicvtaivfildsypinlwaspitgetgalgogga
loodfikmebapthinsfikkeglitfinrkrkweldsypinlwaspitgetgalgogga
loodffixmetaihhhmynafiffytgatpinloslelpenkkhhldmayffiessfannyklfh
kpvittlenynafiskhsfilplitgylesiefuksclruplosknklarralaplyyk
gkpvittlenynafiskhsfilplitgylesiefuksclruplegoknklarralaplyykf
llafenavcddyttekwaklagistgokltharrakwgvoyongomytdafecmv
sytralbsobalyeavyewklagistgokphinghesphrebh
sytralbsobalyeavyewklagistgokph
sytral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="FUT10"
2295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KKEAQALRWLVDRNQNFSSQEFWGLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   357. .1796
/gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         function="adds fucose in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'product="alpha3-fucosyltransferase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/evidence=experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83.1%;
99.7%;
                                                                                                                                                                     ccecreererateracaercaeacrereaccaecarcaeaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1386.6;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              alpha3-linkage to GlcNAc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55
5
                                                                                                                                                                          1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        495
                                982
                                                                                1095
                                                                                                                          922
                                                                                                                                                                                                                       862
                                                                                                                                                                                                                                                                       975
                                                                                                                                                                                                                                                                                                                    802
                                                                                                                                                                                                                                                                                                                                                                 915
                                                                                                                                                                                                                                                                                                                                                                                                                 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                              855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Ś В Š 밁 S 밁 ğ Ś 밁 8 뮍 Ś 밁 Ś В Ś Ď,

Š

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
HSA431184
LOCUS
                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1096
                    Roos,
                                                                                   Roos,C., Kolmer,M., Mattila,P. and Renkonen,R. Composition of Drosophila melanogaster proteom fucosylated glycan metabolism J. Biol. Chem. 277 (5), 3168-3175 (2002) 21671316
                                                                                                                                                                                                                                                                                                                                              2675 k
Homo sapiens partial mRNA for
transferase (FUT10 gene).
AJ431184
  Direct Submission
                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                           FUT10 gene; putative alpha 1,3-fucosyl transferase.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                           AJ431184
AJ431184.1 GI:18996309
                                                                .1698403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAACAGAAAAAA 1655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAACAGACTAGA 1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGAGTGTGGATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCAGAAT 1642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGAACAATCCAAGAAAGAAGCCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGGATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCCAGAGCCCCACAGTGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGAGTGTATGGTGTGCACCAAGGTGTGGGGCTAATATCAGGCTTCAGGAAAAGGGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                         (bases 1 to 2675)
                                                                                                                                                                                                                                                                                                                                                                                          bp mRNA linear PRI
c putative alpha 1,3-fucosyl
                                                                                                                                                   proteome
                                                                                                                                                   involved
                                                                                                                                                                                                                                                                                                                                                                                                                 26-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1155
                                    밁
                                                                       N
                                                                                                                          밁
                                                                                                                                                          Ş
                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Sim
Matches 1388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sdo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                         664
                                                                                679
                                                                                                                            604
                                                                                                                                                                      619
                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                         559
                                                                                                                                                                                                                                                                                                    484
                                                                                                                                                                                                                                                                                                                                              499
                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                   439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304
739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (15-FEB-2002) Roos C., Bioinformatics, MediCel ltd, Haartmansg. 8, FIN-00290 Helsingfors, FINLAND Location/Qualifiers
1. .2675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAA
TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCCTTTGCAGTCCAAAAAAC
                                                                  GTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACC
                                                                                                                                                               GTTTTTCATGAAGAGTCCCCGAAAAACCAATTATAAGCTCTTTCATAAACCAGTGATTACC
                                                                                                                                                                                                                                             GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                  TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                          TEGTEGTCCCCCCTGACGGGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                   TGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGATGGACATACAAAAATGGAGGAAGCÁCCTACGCATTTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82.8%;
milarity 99.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="FUT10"
/codon_start=1
/codon_start=1
/product="putative alpha 1,3-fucosyl transferase"
/prodein_id="CAD24023.1"
/protein_id="CAD24023.1"
/db_xref="GI:1896310"
/db_xref="GOA:Q8T343"
/db_xref="GI:1896310"
/db_xref="GI:1896310"
/db_xref="GI:1896310"
/db_xref="GI:1896310"
/db_xref="GI:1896310"
/db_xref="GOA:Q8T343"
/db_xref="GI:1896310"
/db_xref="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322. .1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cell_type="neuroblastoma"
/tissue_type="brain"
/clome_lib="LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODD001YG24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Score 1382.6; 
; Pred. No. 0; 
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2675;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

723 738 618

543

603

558 483 498 423 438 363 378 303

밁 Š 멼 Ş 밁 Ş В Š 밁

Ş

```
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                RESULT 6
HSA535838
LOCUS
                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                         1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          724
gene) splice variant 1.
AJ535838
AJ535838.1 GI:27475656
alpha3-fucosyltransferase;
Homo sapiens (human)
                                                                              Homo sapiens mRNA for putative a gene), splice variant 1.
                                                                                                                                                                                                                                                                         GAATGAAACAGACTAGA
                                                                                                                                                                                                                                                                                                                    GAATGAAACAGAAAAAA 1655
                                                                                                                                                                                                                                                                                                                                                                                                   AACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTTGCCCAGAGCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGCTGTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TIGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAAATGCAGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCTTAGAAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTTTTCATCTCAAGAGTTTTGGGGCCCTAGTATTCAAGGACTGATTTCAAAAATGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                         1640
                              alternative
                                                                                                                         alpha3-fucosyltransferase
                         splicing;
                                                                                                                                                  linear
                              FUT10
                                                                                                                                                  PRI
                                                                                                                                                01-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                     1623
                                                                                                                                                                                                                                                                                                                                                                                                                  1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                  밁
                                                                                             Ś
                                                                                                                                                  밁
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Sim
Matches 1136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sdo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
       676
                                                                                                                                                                                                                                                                                              496
                                                                                                                                                                                                                                                                                                                                           647
                                                                                                                                                                                                                                                                                                                                                                                      436
                                                                                                                                                                                                                                                                                                                                                                                                                                         587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
                                                                                                                                                  767
                                                                                                                                                                                                                                              707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pirect Submission
Submitted (27-DEC-2002) Oriol R., U504, INSER
Vaillant-Couturier, 94807, Villejuif, FRANCE
related sequences: AJ512465, AJ535839.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Candelier, J.J., Martinez-Duncker, I., Oriol, R. Cloning expression and genomic organization of alphas-fucosyltransferases (FUT10 and FUT11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oriol,R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                              GCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAGAAGGATTGACCTTCAACAGGAAAAAGAAAATGGGAATTGGACAGCTACCCCATTATG
       TATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGG
                                                                                                                                                                                 TATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGG
                                                                                                                                                                                                                                                                                           TGTTTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                         CTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATC
                                                                                                                                                                                                                                                TGTTTCTTCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTC
                                                                                                                                                                                                                                                                                                                                         CTCTGGTGGTCCCCGCTGACGGGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 1673)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="putative alpha3-fucosyltransferase"
/product="putative alpha3-fucosyltransferase"
/product="putative alpha3-fucosyltransferase"
/product="putative alpha3-fucosyltransferase"
/db_xref="goA:Q81717"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="FUT10"
479. .1654
/gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:9606"
1. .1673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               function="adds fucose
note="splice variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1133;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fucose via alpha 1-3 linkage to GlcNAc" ariant 1, lacks the transmembrane domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INSERM, 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain"
                                                                                                  675
                                                                                                                                                                                                                                                                                                                                                                                         495
                                                       886
                                                                                                                                                  826
                                                                                                                                                                                                   615
                                                                                                                                                                                                                                                766
                                                                                                                                                                                                                                                                                              588
                                                                                                                                                                                                                                                                                                                                              706
                                                                                                                                                                                                                                                                                                                                                                                                                                         646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  526
```

Ş 망 Ş Вb Ş 皮 Š В Ş 밁 Ş 밁 Ş В Ş g Ś 망 Ś 밁

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                RESULT 7
HSA512465
LOCUS
 JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                            1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              736
                                                                                                                                                                                                                                                                  gene).
AJ512465
Oriol,R.
Direct Submission
Submitted (16-OCT-2002)
                                                                                                        Candelier, J. Cloning and
                                                                                                                                                                                         AJ511245.1 GI:24370972
alpha 1,3-fucosyl transferase;
Homo sapiens (human)
Homo sapiens
                                                                                                                                                           Bukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                   Homo sapiens mRNA for putative
                                                    Unpublished
2 (bases 1 to
                                                                                                      Cloning
                                                                                                                                                                                                                                                                                                                      HSA512465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGGCTTTTATAGGATCATTGCACAGTATAAGTTTTATCCTAGCTTTTGAGAATGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                            G 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACAAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGACAGCTCTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAACCAGGACAATTACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAGTGCTATTCTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTA
                                                                                                                         .j.,
                                                                                                        genomic
                                                      1623)
                                                                                                        Martinez-Duncker,I., omic organization of .
                                                                                                                                                           Chordata;
Primates;
   Oriol
                                                                                                                                                                                                                                                                                                                    1623
                                                                                                                                                                                                                                                                                                                    đđ
 æ
:
                                                                                                                                                           Craniata; Vertebrata; l
Catarrhini; Hominidae;
                                                                                                                                                                                                                                FUT10
                                                                                                                                                                                                                                                                                                 p mRNA linear PRI 02-JAN-2003
alpha 1,3-fucosyl transferase (FUT10
   U504,
                                                                                                                                                                                                                              gene
                                                                                                        Oriol,R. and Mollicone,R.
a new alpha3-fucosyltransferase
   INSERM, 16
     Av.
                                                                                                                                                             Euteleostomi;; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   946
                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                     В
                                                             Ş
                                                                                                 뫄
                                                                                                                                    Ş
                                                                                                                                                                            В
                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 1133; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                          844
                                                                                                                                                                                                               623
                                                                                                                                                                                                                                                                                                                        664
                                                                                                                                                                                                                                                                                                                                                        503
     803
                                                                                                                                            683
                                                                                                                                                                               784
                                                                                                                                                                                                                                                   724
                                                                                                                                                                                                                                                                                  563
                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                             443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vaillant-Couturier, 94807 Villejuif, FRANCE related sequences: AJ55838, AJ538839. Location/Qualifiers
1. .1623
                                                                                                          GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                         AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                               TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT
                                                                                                                                                                                                          TTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                   CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                     CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                        TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                            TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                             GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                       AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /Godon_start=1
/evidence=experimental
/product="putative alpha 1,3-fucosyl transferase"
/protecin_id="CAD54669.1"
/protecin_id="CAD54669.1"
/db_xref="Gi.24370973"
/db_xref="Gi.24370973"
/db_xref="Gi.24370973"
/db_xref="Gi.24370973"
/db_xref="Gi.27470973"
/db_xref="Gi.27470973"
/db_xref="Gi.2747097103"
/db_xref="Gi.27470973"
/db_xref="Gi.2747097103"
/db_xref="Gi.2747097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345. .1604
/gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /map="8p11.23"
/dev_stage="40 to
/country="France"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1132.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          day
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
         862
                                                                                                                                              742
                                                                                                                                                                               843
                                                                                                                                                                                                                   682
                                                                                                                                                                                                                                                                                                                                                           562
                                                                                                                                                                                                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483
                                                                          802
                                                                                                            903
                                                                                                                                                                                                                                                     783
                                                                                                                                                                                                                                                                                        622
                                                                                                                                                                                                                                                                                                                        723
                                                                                                                                                                                                                                                                                                                                                                                             663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
HSA535839
LOCUS
                                                                                                                                                                        JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                              FEATURES
                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                      ORGANISM
                        CDS
                                               gene
                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                        1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       964
                                                                                                                                                                                                                                                                                                      gene), inactive short splice variant.
AJ535839
AJ535839.1 GI:27475658
alpha3-fucosyltransferase; alternative
                                                                                                                      Direct Submission
Submitted (27-DEC-2002) Oriol R., U
Vaillant-Couturier, 94807, Villejui
related sequences; AJ512465, AJ5358
                                                                                                                                                                                                        Candelier,J.J., Martinez-Duncker,I., Oriol,R. and Mollicone,R Cloning expression and genomic organization of two new human alpha3-fucosyltransferases (FUT10 and FUT11)
                                                                                                                                                                                                                                                                                                                                             HSA535839 1651 bp mRNA linear PRI 01-FEB-.
Homo sapiens mRNA for putative alpha3-fucosyltransferase (FUT10 gene), inactive short splice variant.
                                                                                                                                                                                               Unpublished
                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGG 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 1651)
                        /gene="FUT10"
559. .1632
559. .1632
/gene="FUT10"
/function="unknown"
                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                          ocation/Qualifiers
                                                        xref="taxon:9606"
                                                 .1651
                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae
                                                                                                                       AJ535838
                                                                                                                        , US04, I
                                                                                                                                                                                                                                                                                                            splicing;
                                                                                                                                               INSERM,
                                                                                                                                                                                                                                                            Hominidae;
                                                                                                                                                16
                                                                                                                                                                                                                                                                                                            FUT10
                                                                                                                                                Avenue
                                                                                                                                                                                                                                                            Euteleostomi;
; Homo.
                                                                                                                                                                                                                                                                                                                                                                          PRI 01-FEB-2003
                                                                                                                                                Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1102
                 δ
                                             밁
                                                                  S
                                                                                              맑
                                                                                                                    á
                                                                                                                                               맑
                                                                                                                                                                 S
                                                                                                                                                                                              밁
                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                               뮹
                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                               뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 1133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                              1014
                      945
                                                                                                                                               954
                                                                                                                                                                      765
                                                                                                                                                                                               894
                                                                                                                                                                                                                                                834
                                                                                                                                                                                                                                                                       645
                                                                                                                                                                                                                                                                                                                        585
                                                                                                                                                                                                                                                                                                                                              714
                                                                                                                                                                                                                                                                                                                                                                                                654
                                                                                                                                                                                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                                                                                                                                                                                 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263
```

```
/note="inactive short splice variant, lacks the transmembrane domain and the first and half of the second conserved peptide motifs"
/codon_startel
/product="putative alpha3-fucosyltransferase"
/protein_id="CAD59772.1"
/db_xref="GA:Q81V16"
/db_xref="GOA:Q81V16"
/db_xref="SPTREMB1:Q81V16"
/db_xref="SPTREMB1:Q81V16"
/translation="MGTGQLPHYALIVUPADGGDWEVRPMWSRCLFLHHQDDLPPSSHD
/translation="MGTGQLPHYALIVUPADGGDWEVRPMWSRCLFLHHQDDLPPSSHD
/translation="MGTGQLPHYALIVUPADGGDWEVRPMWSRCLFLHHQDDLPPSSHD
/translation="MGTGQLPHYALIVUPADGGDWEVRPMWSRCLFLHQVIVYQSDCD
PSDRDSYVRELMTYIEVDSYGECLRNXDLPQCLKNPASMDADGFYRIIAQYKFILAF
ENAVCDDYITEKFWRPLKLGVVFVYYGSPSITDWLPSKMSAIIVSEFSHFRELASYIR
RLDSDRLYBAYVEWKLKGEISNGRLTALFERKWGVQDVNQDNYIDAFECMVCTKVW
ANIRLQEKVSKSKYGIEPAGWPS"
```

```
GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 1004
                                                                                                                            ACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAAGACTTGCTCCGCT
                                                                                                                                                                                                                                                                                                                                                                                      CAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTTGCAAG
GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 1193
                                                                                                                                                                              GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                         GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                            CAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----ATGGTACTGACTTTAACATAGATAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTCCCCGCTGACGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                        ACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTTCTATGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAGGTTTAAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65.0%;
96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1084.4; DB 9;
Pred. No. 1.5e-307;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1651;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                           884
                                                                                                                                                                              1073
                                                                                                                                                                                                                                                                    1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                   944
                                                                                                                                                                                                                                                                                                                 824
                                                                                                                                                                                                                                                                                                                                                              953
                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                    893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     773
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
AY344579
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1389 bp mRNA linear MAM 03-AUG
Bos taurus putative alpha 1,3-fucosyltransferase (fut10) mRNA,
complete cds.
AX344579
                                                                                                                                                                                                                                                                                                                                                                    Submitted (17-JUL-2003) EA 3176 Glycobiologie et Biotechnologie, Faculte des Sciences et Techniques, 123, Avenue A. Thomas, Limoges 87060, France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto Mammalla; Eutherila; Cetartiodactyla; Ruminantia; Pecora; Bovol Bovidae; Bosinae; Bos.

1 (bases 1 to 1389)
1 (bases 1 to 1389)
1 (dermot, A., Dupuy, F., Loriol, C., Julien, R. and Maftah, A. Genmot, C., Organization and expression profile of putative alpha 1,3-fucosyltransferase genes, futl0 and futl1, in Bos taurus Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                           Germot, A.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AY344579.1 GI:33303527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTGTGGGCTAATATCAGGCTTCAGGAAAAGG 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCCAGGGAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTGTGGGCTAATATCAGGCTTCAGGAAAAGG 1585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAA 1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1389)
/gene="fut10"
/gene="fut10"
/godon_start=1
/godon_start=1
/product="putative alpha 1,3-fucosyltransferase"
/product="putative alpha 1,3-fucosyltransferase"
/protein_id="AAQ02331.1"
/protein_id="AAQ02331.1"
/db_xref="G1:3330528"
/translation="MATVFLLITIQVVVELGKFEGKKFKNSHLKDGHAQMEAEPLHLH
PFENREGL/TLNRKKTLAADSFPINLWMSPLTGETGRLGQCGADACFFTLNRTYLHHHR
TKAFLTYGTDFSLDSLPLARKAHDWALFHEESPKNNYKLFHQPVITLENYNAIFSRH
SHLPLTTQYLEGTEVLTSLRHLVELFSKNHLRKSLAPLVYVQSDCDPPSDRDSYVREL
MTYIEVDSYGECLRNKPLPPQLSNFASNDADGFFRILAQYKFILAFERNAVCDDYITEK
MTYIEVDSYGECKNKPLPPQCSNFASNDADGFFRILAQYKFILAFERNAVCDDYITEK
MTYLEVDSYGECKNKPLPPQCSNFASNDADGFFRILAQYKFILAFERNAVCDDYITEK
                                                                                                                                                                                                                                                  /organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
1. .1389
                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. .1389
                                                                                                                                                                                                                           /gene="fut10"
                                                                                                                                                                                                               .1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAM 03-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
```

IEWKLKGEISNORLLTALRERKWGVQDVKQDNYIDAFECMVCTKVWDNIRLQEKGLPP KRWQADVTHLSCPEPTVFAFSPLVPRRRSLREMWIPSFQQSKKEARALRWLVDRNQNF STQEFWALVFKD"

991	ATCAGAGC	932	망
1222	CTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAG	1163	Ş
931	GATCCCCCAGCATCGCAGACTGGCTTCCAAGCAATAGAAGTGCTATTCTGGTATCAGAAAT	872	DB dd
1162	CCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTAT	1103	γQ
871	TGTATTAC	812	DB
1102	CATCACTGAGAAGTTCTGGAGGC	1043	8
811	rcgcccagtataagtttatcttgcttttgagaatgcggtgtgc	752	g
1042	TATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGAT	983	Ş
751	CGAAACAAGCCTCTCCCTCCACAGTTGAGCAACCCGGCCTCGATGGACGC	692	Db
982	CTCCCTCAGCA	923	Ş
691	CTACGGCGA	632	멍
922	GGGACAGCTATGTTCGCGAGGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT	863	δ
631	TCCGGAAGAGCCTCGCCCCGCTGGTGTACGTACAGTCCGACTGTGACCCGCCTCAGACA	572	뮍
862	AAAGACTTGCT	803	Ş
571	GGGCACGGAAGTCCTGACGTCACTCCGACACCTGGTCCCCTTGCGGTCCAAAAACCAC	512	dd
802	ATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAC	743	Ş
511	TCAACTACACCGCCACCTTCAGCCGGCACTCCCACCTGCCACTAACCACCCAGTACTTGG	452	D dd
742	CAACTACACTGCCACGTTCAGCAGGCATTCCCCACTTGCCCACTAACTA	. 683	Ϋ́
451	CCACGAAGAGTCTCCAAAAAATAATTATAAGCTCTTTCACCAGCCAG	392	Дb
682	ATGAAGAGT	623	Ş
391	CTGACTTTAGCATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCACGACTGGGCCCTTT	332	фd
622	CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT	563	Ş
331	CACCATCAACCGGACCTACCTCCATCATC	272	당
562	CATCAACCGGA	503	Ş
271	GTCCCCACTGACTGGGGAAACCGGAAGGCTCGGCCAGTGTGGGGCGGATGCTTCCTTC	212	D
502	GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT	443	δõ
211	ACTGACCCTGAACAGGAAGAAGACATTGGCAGCTGACAGCTTCCCCATCATGCTCTGG	152	dg dg
442	GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT	383	9
151	AGCAGAGCCTCTCCACCTCCATCCGTTCTTTAATAC	92	D,
382	TGGACATACAAAAATGGAGGAAG	323	Š.
91	AGGTCGTGGTTGAGCTGGGAAAATTTGAAGGCAAGAAGTTTAAAAATTCTCATTTAAAAG	32	đđ
322	roatgettgagetgegegaagtitgaaaggaaggagttaaaaagttccagtitgcaa	263	Ş
1;	60.7%; Score 1013.8; DB 4; Length 1389; Similarity 84.6%; Pred. No. 9.2e-287; 1; Conservative 0; Mismatches 207; Indels 3; Gaps	Query Match Best Local Matches 115	

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
AC067838/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                     RS Biren, B., Linton, L., Nusbaum, C., Lander, E., Abraham, H., Allen, N., Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Anderson, S., Castele, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, R., Johnson, R., Johnson, R., Johnson, K., Marchan, L., Gardyna, K., Galagan, J., Gardyna, S., Ginde, S., Heaford, A., Horton, L., Grand-Pierre, N., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McBeaters, R., Misora, T., Landers, T., Lehoczky, J., Misora, T., Miranda, C., Mienga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Ollvar, T.M., Olivar, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Tráyllio, J., Voung, G., Zainoun, J., Zimmer, A., and Zody, M.

Direct Submission

Al Submitted (27-APR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACU6/838 104120 bp DNA linear PRI 21-MAR-2
Homo sapiens chromosome 8, clone RP11-722E23, complete sequence.
AC067838
Birren,B., Nusbaum,C., Lander,E., Ali,A., Allen,N., Anderson Barna,N., Bastien,V., Bloom,T., Boguslavkiy,L., Boukhgalter. Camarata,J., Chang,J., Chazaro,B., Choepel,Y., Collymore,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Birren,B., Nusbaum,C. and Lander,E.
Homo sapiens chromosome 8, clone RP11-722E23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota;
Mammalia; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC067838.18
HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
ammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
(bases 1 to 104120)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTCAACTCAAGAGTTTTGGGCCCTAGTATTCAAGGACTAA 1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGACTGA 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGGATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTAC 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGAACAATCCAAGAAAGAAGCCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT 1582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTCTCACC----CCTGGTCCCACGTCGGCGCTCTTTGCGAGAGATGTGGATACCAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCCAAAAGATGGCAGGCAGACGTTACCCACCTGAGCTGTCCAGAGCCTACAGTGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGAGTGTATGGTGTGCACCAAGGTGTGGGATAACATTAGGCTCCAGGAGAAGGGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGCTCAGGGAACGGAAGTGGGGGGGTGCAGGACGTTAAGCAGGACAACTACATCGATGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCAGGCCTACATAGAATGGAAGCTGAAGGGCGAGATCTCGAATCAGCGACTTCTCACTG 1051
                                                                                        (bases 1 to 104120)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 104120)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:29135646
                             Allen, N., Anderson, S., iy, L., Boukhgalter, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRI 21-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1288
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jurect Submitsed (03-NOV-2002) Whitehead Institute/MIT Center for Genome RESEARCH, 320 Charles Street, Cambridge, MA 02141, USA Research, 320 Charles Street, Cambridge, MA 02141, USA RESEARCH, 320 Charles Street, Abouelleil, A., Allen, N., RS Birren, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V., Bloom, T., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V., Bloom, T., Choepel, Y., Collymore, A., Cook, A., Cooke, P., Corum, B., DeArellano, K., Diaz, J.S., Dodey, S., Dooley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagopian, D., Hagos, B., Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., Lui, A., Mabbitt, R., MacLean, C., MacOnald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nones, C., Nocarthy, M., Norbu, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Rachinjka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P., Rognan, J., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Stubbe, M., Vassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birren, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barran, N., Bastien, V., Bloom, T., Boguslawkiy, L., Boukhgalter, B., Comarata, J., Chargay, B., Choepel, Y., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Farceira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Mathews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Noyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Norbu, C., Peterson, K., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Roy, A., Schauer, S., Schupback, R., Stojanovic, N., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Farro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, M., Illev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacClan, C., Macdonald, P., Major, J., Menga, V., McCarthy, M., Meldrin, J., Meneus, L., Mihova, T., Mlenga, V., McCarthy, M., Meldrin, J., Meneus, L., Mibova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phurkhang, P., Pierre, M., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Roy, A., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Talamas, J., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                        Submitted (21-MAR-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 21, 2003 this sequence version replaced gi:24496795. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wyman, D., Young, G
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Research, 320 Charles Street, Cambridge, 4 (bases 1 to 104120)
                                                                                                                                                                                                                                                  http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (10-OCT-2002) Whitehead Institute/MIT Center for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                 Center: Whitehead Institute/ MIT Center for Genome Research Center code: WIBR
                                                Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                            -- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Talamas, J.,
```

COMMENT

```
FEATURES
                                    repeat_region
                                                                     repeat_region
                                                                                                                                 repeat_region
                                                                                                                                                               repeat_region
                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Only the first 104.1 kilobases of the middle contig is being submitted.
This clone is completely overlapped by number AC09114 [WICGR project L13069] and AC104027 [WICGR project L21993].

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center project name: L9405
Center clone name: 722_E_23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt family="L2"
complement (4278 . 4692)
/rpt family="MLTIJ1"
4818 . .4937
/pt family="Aluy"
12351, .12359
/rpt family="Aluy"
1251, .12539
/rpt family="AluJo"
12540, .12559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (6892. .6955)
/rpt_family="L2"
complement (7144. .7447)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----- Project Information
                                                                                                                                                                                                                                                                                                                                                                                   complement(7907. .7982)
/rpt_family="MIR"
8737. .8773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(1401..1576)
/rpt family="MLT1F-int"
complement(1940..2100)
/rpt family="MLT1H1"
/rpt family="MLT1H1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="MIR" 6708. .6797
                                                                                                                                                                /rpt_fami
11391. .1
                                                                                                                                                                                                                                                                                                          complement(10454. .10537)
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                        complement(9080. .9150)
/rpt_family="MLT1K"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (865.
                                                                                                                                                                                              /rpt_family="MIR"
11247. .11379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (clone="RP11-722E23"
(clone lib="RPCI-11 Human Male BAC"
). .142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'map="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                family="MLT1F"
Tement(00'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tement (984. .1374)
_family="MLT1F"
                                                                    family="AluJo"
lement(12038. .
                                                                                                                                 family="AT_rich"
1. .11721
                                                                                                                                                                                                                                           _family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family="L2"
ement(c:
                                                                                                                  family="AluSq"
                                                                                                                                                                                                                                                                         family="AluSg"
                                                                                                                                                                                                                                                                                                                                                                    family="(CAAAAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                     family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family="(TA)n"
                                                                                                                                                                                                                              11034
                                                                                                                                                                                                                                                                                           10843
                                                                                                                                                                               .ly="L2"
                                                                                  밁
                                                                                                               Ş
                                                                                                                                                  밁
                                                                                                                                                                       Ş
                                                                                                                                                                                                            B
                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                  å
                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 843; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   70127
                                                                                                                                                                                                                                                                            69647
                                                                                                                                                                                                                                                                                                                                          69707
                                                                                                                                                                                                                                                                                                                                                                      1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70187 TTTCTTCTCCTAGGTACTGACTTTAACATAGATAGCTTACCTCTGGCTCGGAAAGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG
                                                                                                                                                                                                                                 ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGACTGGGCTGTTTTTCATGAAGAGTCCCCCGAAAAAACAATTATAAGCTCTTTCATAAA
                                         AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCCTAATATCAGGCTT
                                                                                      CAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC
                                                                                                        CAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC
                                                                                                                                                   TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC
                                                                                                                                                                          TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC
                                                                                                                                                                                                                                                                            GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT
                                                                                                                                                                                                                                                                                                GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT
                                                                                                                                                                                                                                                                                                                                          AATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTA
                                                                                                                                                                                                                                                                                                                                                              AATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGAGGCCACTGAAACTGGGGGGTA 1086
                                                                                                                                                                                                                                                                                                                                                                                                      ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GÁCCCÁCCATCAGACAGGGÁCAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCCACTTGCCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCTCTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="(GGGA)n"
complement(13576...13750)
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(14533. .14599)
/rpt_family="MER5A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (14600. .14891)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (13954. .14317)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="(GGA)n"
12578. .12889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="AluSx"
12903. .12923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'zpt_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 838.8; DB 9; Pred. No. 4.9e-235; 0; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 104120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                               1206
                                                                                                                                                                                                                                                                                                                                                                                                                                     1026
                                                          1386
                                                                                                                                                                                   1266
                                                                                                                                                                                                                                                                                                          1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            846
                            69348
                                                                                                                     1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  666
                                                                                       69408
                                                                                                                                                     69468
                                                                                                                                                                                                                 69528
                                                                                                                                                                                                                                                                              69588
                                                                                                                                                                                                                                                                                                                                           69648
                                                                                                                                                                                                                                                                                                                                                                                                       69708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70128
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1091144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                             Sirren, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barran, B., Nusbaum, C., Lander, E., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Cooke, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galgan, J., Gardyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Mathews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Marhay, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Menga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Peterson, K., Phunkhang, P., Pierre, N., Schauer, S., Schupback, R., Stojanovic, N., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Electric to 185872)

2 (bases I to 185872)

3 (barren, B., Linton, L., Nusbaum, C., Lander, B., Allen, N., Anderson, S., Barren, B., Linton, L., Neoguslavkiy, L., Boukhgalter, B., Brown, A., Campatlan, N., Campoplano, A., Chang, J., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Collins, S., Collymore, A., Cooke, P., Pritzhugh, W., Gage, D., Gardam, J., Gardyna, S., Ginde, S., Gyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Heaford, A., Horton, L., Hulme, W., Iliev, I., Johnson, R., Cones, C., Karatas, A., Lacocque, K., Lamazzares, R., Landers, T., Lehoccky, J., Levine, R., Liu, G., MacLean, C., Macdonald, P., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J., McCarthy, M., McEwan, C., McCarnan, K., McPheeters, R., Meldrim, J., McCarthy, C., Norbu, C., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Resetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Sougnez, C., Spencer, B., Stange-Thomann, N., Severy, P., Subrission, M., Talamas, J., Tesfaye, S., Theodocre, J., Travers, M., Travis, N., Trigillo, J., Vassilev, H., Talamas, J., Tesfaye, S., Sainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69347
Research, 320 CHAPTER ALL, Allen, N., Allen, N., Allen, N., Barren, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Boukhgalter, Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, Barna, N., Chang, J., Chazaro, B., Choepel, Y., Collymore, A. Camarata, J., Chang, J., Chazaro, B., Dewar, K., Diaz, J.S., Dodg Camarata, Cooke, P., DeArellano, K., Dewar, K., Gage, D., Galagan, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185872 bp DNA linear PRI 05-NOV-2002
Homo sapiens chromosome 8, clone RPI1-359B20, complete sequence.
AC091144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (01-APR-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA 3 (bases 1 to 185872)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                 Submitted (25-OCT-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens chromosome 8, clone RP11-359B20
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 185872)
Birren,B., Nusbaum,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC091144.12 GI:24580467
                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGAAAAGG 69338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGAAAAGG 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schupback, R., Seaman, S.,
                                                                                                                                                                             Boukhgalter, B.,
                                                                                                                                                                                                                        Anderson, S.,
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
repeat_region
                                                                                                                                   repeat_region
                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Kartas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Madonald, P., Major, J., Matthews, C., McCarthy, M., MacLean, C., Mcdonald, P., Mihova, T., Matthews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Norman, C., McConnor, T., O'Donnell, P., O'Neil, D., Oliver, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Roy, A., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Talamas, J., Testaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Myman, S., Voung, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Parker, S., Parkers, R., Lander, S., Lander, A. and Zody, M., Parker, S., Parkers, R., Landers, C., Landers, L., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Parker, S., Parkers, R., Landers, L., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Parker, S., Parkers, R., Parkers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (05-NOV-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA ON NOV 5, 2002 this sequence version replaced gi:24371492. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gardyna, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center: Whitehead Institute/ MIT Center for Genome Research Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center clone name: 359_B_20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                          /rpt_family="AluSc"
2741. .3183
/rpt_family="L1MC4a"
3202. .3323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement (813. .918)
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="MLT;
complement(1694.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (253.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (2063.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(1132. 716
/rpt_family="MLT2B2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ) rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="MER50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="RPCI-11 Human Male BAC"
pomplement(1. .273)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /chromosome="8"
/map="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                          /rpt_family="(TAAAA)n"
3398. .3636
                                                                                                                                                                                                                                                                                            rpt_family="FLAM_C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="L1MC4a"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="(A)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="RP11-359B20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gord, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .185872
                                                                                                                                                               _family="LIMC5"
                                                                                            _family="L1MC5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="AluSx"
                                       _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family="MER50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family="FLAM_C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                             y="AluSc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Graham,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1628)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grand-Pierre, N., Hafez, N.
```

```
Ş
   밁
                                                         DP.
                                                                                    Ş
                                                                                                                    Matches 843;
                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                        TICCTCTICTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCAT
CATGACTGGGCTGTTTTTCATGAAGAGTCCCCCGAAAAAACAATTATAAGCTCTTTCATAAA 144269
                       CATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTTCATAAA 666
                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="L1MC5"
10942. .11275
/rpt_family="Charlielb"
complement(11276. .11577)
/rpt_family="AluSx"
11578. .11708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="Aluyb"
complement(9802..9904)
/rpt_family="LINC5"
9998..10295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="AluSq"
complement(7502. 7782)
/rpt_family="AluSx"
complement(7840. 8149)
/rpt_family="AluSx"
8228. 8248
                                                                                                                                                                                                                   /rpt_family="AluSx"
complement(12630. 12743)
/rpt_family="LIMB6"
complement(12744. .13041)
/rpt_family="AluSg"
complement(13042. .13612)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (5071. 5198)
/rpt_family="FLAM_C"
complement (5190. 5297)
/rpt_family="Alu8g"
5345. .5658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="AluSq"
4646. 4939
/rpt_family="AluJo"
4983. .5004
/rpt_family="AT_rich"
5024. .5046
                                                                                                                                                                                 /rpt_family="LIMB6"
13613. 13668
/rpt_family="LIMB6"
                                                                                                                                                                                                                                                                                                                                                   /rpt_family="Charlie1b"
complement(11733...12029)
/rpt_family="AluSp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AT_rich"
complement(8522. .8823)
/rpt_family="AluSx"
8824. .8899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="AluJb" 6427 .6481
                                                                                                                                                                                                                                                                                                         complement (12082. .12251)
/rpt_family="FRAM"
12329. .12629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="AluSq"
complement(10874. ...
                                                                                                                                                                           /rpt_family="Charlielb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="MIR" complement (9469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="MIR" 9039. .9236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="Alusc"
6290. .6426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AT_rich"
complement(6592. .689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="Alusx" 5908. .6196
                                                                                                                               50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _family="(T)n"
                                                                                                                 0; Mismatches
                                                                                                                Score 838.8; DB 9; Pred. No. 5.2e-235; 0; Mismatches 7;
                                                                                                                 Indels 0; Gaps
                                                                                                                                          Length 185872;
                                                                                     606
                                                        144209
                                                                                                                 0
                                                                                                                                                                                                                  BC030474
LOCUS
DEFINITION
                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                    REFERENCE
                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                        BC030474
BC030474.1 GI:20988073
                                                                                                                                                                                                  BC030474 2874 bp mRNA linear ROD 06-OCT-2003 Mus musculus fucosyltransferase 10, mRNA (cDNA clone MGC:40819 IMAGE:5368333), complete cds.
```

Mus musculus (house mouse)

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus. 1 (bases 1 to 2874)

Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G., Klausner,R.D., Collins,F.S., Wagner,L., Sheumen,C.M., Schuler,G.D., Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K., Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J.J., Hsieh,F., Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L., Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L.,

```
REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Willalon, D.K., Muzny, D.M., Sodergreen, E.J., Lu, X., Gibbs, R.A., Villalon, D.K., Muzny, D.M., Sodergreen, E.J., Lu, X., Gibbs, R.A., Fahey, J., Hitting, M., Madan, A., Young, A.C., Shevchenko, Y., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Sanchez, A., Whiting, M., Madan, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse Cruh, accuraces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter, Ayele,K., Beckstromberg,S.M., Benjamin,B.,
Akhter,N., Ayele,K., Beckstromberg,S.M., Benjamin,B.,
Blakesley,R.M., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskerian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (07-MAY-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLML at: http://image.llnl.gov Series: IRAK Plate: 65 Row: h Column: 14 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaithersburg, Maryland,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .2477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 2874)
/db¯xref="LocusID:171167"
/trānslation="MVRFQRRKLLASCLCVTATVFLMVTLQVVVELGKFERKKLKDSN
VQDGHRDVEGEPKHLEPPPEKEALALAGRTKVDAGSYPIVLMWSPLTGETGRLGQCGA
                                             /product="fucosyltransferase
/protein_id="AAH30474.1"
/db_xref="GI:20988074"
/db_xref="LocusID:171167"
                                                                                                                                                                                                                                                                                                                                    /clone="MGC:40819 IMAGE:5368333"
/tlssue_type="Eye, retina, mouse strain C57B1\6"
/clone_lib="NIH_MGC_94"
/lab_host="DH10B"
                                                                                                                                             codon_start=1
                                                                                                                                                                                         /note="synonym: MGC40819"
/db_xref="LocusID:171167"
/db_xref="MGI:2384748"
                                                                                                                                                                                                                                                                /gene="Fut10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                       xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                  ="Vector:
                                                                                                                                                                                                                                                                                                                pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                       Ş
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                              1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                       923
                                                                                                                                                                                                                                                                       964
                                                                                                                                                                                                                                                                                                                     863
                                                                                                                                                                                                                                                                                                                                                                  904
                                                                                                                                                                                                                                                                                                                                                                                                                   803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          664
```

```
misc_feature
                                                                                                  1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTGACCTTCAACAGGAAAAGGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGACATAGAGATGTGGAGGGAGAGCCTAAACACCTGGAGCCGTTTCCTGAAAAAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTACCATCAACAGGACCTTCCAGCATCATCCGATGACCAGGGCCTTCCTATTCTACGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTGGCCTTGGCTGGAGGACAAAGGTGGATGCTGGTAGCTACCCCATCGTGCTGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                      TTAGAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                   AAGGCGTGGACGTCCTGAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAACCATACGGCCACATTCAGCAGGCATTCCCCACTTGCCACTGACTACGCAGTACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCATCATGACTGGGCGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
TCTACAGAGTCATTGCCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTCTGTGACG
                                         TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTGAGAATGCAGTTTGTGATG
                                                                                                  TACAGAACAGAGATCTTCCCCAGCAGCTGAAAAACCCCGCCTCCATGGATGCTGATGCTT
                                                                                                                                                 GEGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTT
                                                                                                                                                                                                                                                                                                          TAAGACAAAAACTGGCCCCATTGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGAAGAGTCCCCCAAAAACAATTATAAAGCTCTTCCATAAACCAGTCATCACCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47.9%;
nilarity 81.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DACFFTINRTFQHHPMTRAFLFYGTDFNIDSLFLPREAHHDWALFHEESPKNNYKLFH
KPVITLFNHTATFSRHSHLPLTTQYLEGVDVLKSLRYLVFLQAKNNLRQKLAFLVYVQ
SDCDPPSDRDSYVRELMAYIEVDSYGECLQNRDLPQQLKNPASNDADAFYRVIAQYKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPTIADWLPSNRSAILVSEFSHPRELA
SFIRRLDYDDGLYETYVEWKLKGKISNQRLLTALNEREWGVQDINQDNYIDSFECMVC
RRVWANSRLQEQVSEWKSGGWHGPSLCVVLVFLLWWLPATGLYS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Glyco_transf_10; Region: Glycosyltransfera.
10 (fucosyltransferase). This family of
Pucosyltransferases are the enzymes transferring:
from GDP-Fucose to GlcNAc in an alphal, 3 linkage.
family is know as glycosyltransferase family 10"
/db_xref="CDD:pfam00852"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 799.6; DB 10;
Pred. No. 1.2e-223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glycosyltransferase family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                          1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483
                                                      1042
                                                                                                        1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                                                                                                                                    862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603
                                                                                                                                                                                                                                                               922
                                                                                                                                                                                                                                                                                                                   963
                                                                                                                                                                                                                                                                                                                                                                                                                        903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      723
```

ACTACATCACTGAGAAGTTCTGGAGGGCACTGAAACTGGGGGGTAGTCCCTGTATATTACG

```
REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
BC062113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                             DEMBUA
                                                                                                                                                                                                                                                                                                                                                                                  Strauberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Milany, S.J., Bosak, S.A., McEwan, P.G.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marza, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
D1 12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1223
                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library Preparation: M. Bento Soares, University of Iowa
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
DNA Sequencing by: Genome Sequence Centre,
                                                                                                                                                                                                                 Direct Submission
Submitted (13-NOV-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Rocm 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                   NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus fucosyltransferase 10, IMAGE:6816067), complete cds. BC062113
                                                                                                                                                                                                                                                                                                                            Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
Mus musculus
Eukaryota; Metazoa; Chorda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                             12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGC
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BC062113.1 GI:38328410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATCCCCCACCATCGCCGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTGTCGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGAGTGTATGGTGCCGCAGGGTGTGGGCAAACAGTAGGCTGCAGGAGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGG 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCTCAATGAACGGGAGTGGGGTGTGCAGGACATTAACCAGGACAACTACATTGACTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCTCACCCCAGAGAGCTGGCGAGCTTCATTAGGAGACTGGATTATGACGATGGGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTACATCACAGAGAAGTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTGTATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGAGACCTATGTAGAGTGGAAGCTAAAGGGCAAGATCTCTAACCAGCGGCTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 2978)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 2978)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA linear F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ROD 11-DEC-2003
B MGC:69807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1222
                                                                                                               Ś
                                                                                                                                                                     日
                                                                        В
                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                         383
                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                            GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="Fut10"
/note="synonym: MGC40819"
/db_xref="LocusID:171167"
/db_xref="MGI:2384748"
387_..1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/strain="C57BL/6"
/db_xref="taxon:10090"
/clone="MGC:69807 IMAGE:6816067"
/clsue_type="Brain, mouse, 13.5,
/tlssue_type="Brain, FWO"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                            47.9%;
81.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e="Vector:
                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                Score 799.6; DB 10;
Pred. No. 1.2e-223;
0; Mismatches 209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pyx-ASC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BMAP FWO"
                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
```

info@bcgsc.bc.ca
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butter....,
Susama Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Susama Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven,
Ness, Pawan Pandoh, Anna-Liisa Frabhu, Parraneh Saeedi, Jacqueline
Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Scott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.

Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 132 Row: h Column: 16 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF

/codon_start=1
/product="fucosyltransferase 10"
/product="fucosyltransferase 10"
/product="fucosyltransferase 10"
/product="fucosyltransferase 10"
/product="fucosyltransferase 10"
/db_xref="g1:38328411"
/db_xref="G1:38328411"
/db_xref="LocusID:171167"
/db_xref="LocusID:171167"
/translation="mverporrextLasct_cvtAntvDAGSyPIVLwwspLTGETGRLGQCGAVQDGHRDVEGEBKHLEPFEKEALALAGRTKVDAGSyPIVLwwSpLTGETGRLGQCGAVQCFTINRTPQHHPMTRAFLFYGTDKIDSLDFREAHHWALFHBESPGNYKLFH
ADACFTINRTPQHHPMTRAFLFYGTDXLGGVDVLKSLRYLVPLOAKNNLACKLAPLVVQ
SDCDPFSDRDSYVRELMAYIEVDSYGECLQNRDLPQQLKNPASMDADAFYRVIAQYKF
ILAFENAVCDYTTEKFWRPLKIGVVPYYGSPTIADWLPSRTSAIIVSBFSHPRELA
SFIRRLDYDDGLYETYVEWKLKGKISNQRLLTALKBREWGYQDINQDNYIDSFECMVC
RRWANSRLQEQVSEWKSGGWHGPSLCVVLVFLLWWLPATGLYS" 13.5, 14.5, 16.5, 17.5

AGGTAGTGGTTGAGCTTGGGAAATTTGAAAGGAAGAAGCTTAAAGACTCCAATGTGCAAG GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT ACGGACATAGAGATGTGGAGGGAGAGCCTAAACACCTGGAGCCGTTTCCTGAAAAAGGAAG AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAAGTTCCAGTTTGCAAG 322 CACTGGCCTTGGCTGGAGGACAAAGGTGGATGCTGGTAGCTACCCCATCGTGCTGTGGT 633. .1574

/note="Glyco_transf_10; Region: Glycosyltransferase family / notesyltransferase). This family of 10 (fucosyltransferases). This family of Fucosyltransferases are the enzymes transferring fucose from GDP-Fucose to GlcNAc in an alpha1,3 linkage. This family is know as glycosyltransferase family 10"

/db_xref="CDD:pfam00852" Indels Length 2978; 0; Gaps 442 585 382 525

```
RESULT 14
GGA535692
LOCUS
                               ACCESSION
VERSION
KEYWORDS
   SOURCE
ORGANISM
                                                                                                   DEFINITION
                                                                                                                                                                                                   1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1126
                                                                                                                                                                                                                                                                                                   1283
                                                                                                                                                                                                                                                                                                                                    1426
                                                                                                                                                                                                                                                                                                                                                                                                  1366
                                                                                                                                                                                                                                                                                                                                                                                                                                   1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 646
                                                                                               GGA535692
Gallus ga
                                                                gene).
AJ535692
AJ535692.1 GI:27368920
alpha3-fucosyltransferase, FUT10
Gallus gallus (chicken)
Gallus gallus
                                                                                                                                                                                                                             TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTACATCACAGAGAGTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTGTATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGACAAAAACTGGCCCCATTGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCATGAAGAGTCCCCCAAAAACAATTATAAGCTCTTCCATAAACCAGTCATCACCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCATCATGACTGGGCGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                    TTGAGTGTATGGTGTGCCGCAGGGTGTGGGCAAACAGTAGGCTGCAGGAGCAGG
                                                                                                                                                                                                                                                                                                 CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                     ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCCCCACCATCGCCGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTGTCGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTACAGAGTCATTGCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTCTGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITATAGGATCATIGCACAGTATAAGITTATCCTAGCTTTTGAGAATGCAGITTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACAGAACAGAGATCTTCCCCAGCAGCTGAAAAACCCCGGCTCCATGGATGCTGATGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGGCGTGGACGTCCTGAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAACCATACGGCCACATTCAGCAGGCATTCCCCACTTGCCACTGACTACGCAGTACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTACCATCAACAGGACCTTCCAGCATCATCCGATGACCAGGGCCTTCCTATTCTACGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTCCCCACTGACTGGAGAGACTGGCCAGGCTTGGCCAGTGTGGGGCCAGATGCTTCT
                                                                                                                                                                                                                                                                   CTCTCAATGAACGGGAGTGGGGTGTGCAGGACATTAACCAGGACAACTACATTGACTCGT
                                                                                                                                                                                                                                                                                                                                    ATGAGACCTATGTAGAGTGGAAGCTAAAGGGCAAGATCTCTAACCAGCGGCTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                    TCTCTCACCCCAGAGAGCTGGCGAGCTTCATTAGGAGACTGGATTATGACGATGGGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1222
                                                                                               gallus mRNA for
                                                                                               1657 bp
putative
                                                                                                 alpha3-fucosyltransferase (FUT10
                                                                                                                    linear
                                                                                                                   VRT 23-DEC-2002
                                                                                                                                                                                                                                    1396
                                                                                                                                                                                                    1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1065
                                                                                                                                                                                                                                                                                                    1342
                                                                                                                                                                                                                                                                                                                                    1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  765
                                                                                                                                                                                                                                                                                                                                                                     1282
                                                                                                                                                                                                                                                                                                                                                                                                      1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                  S
                                                                                                   뮍
                                                                                                                                Ş
                                                                                                                                                                   밁
                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
   Ş
                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                      503
                                                                                                                                                                       460
                                                                                                                                                                                                    443
                                                                                                                                                                                                                                      400
                                                                                                                                                                                                                                                                                                      349
                                                                                                     520
                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                                                      263
      623
                                                                                                                                                                                                                                                                                                                                                                                                                                       946;
```

밁 Ş 맑 Ş 밁 Š 망 5 밁 Ś 뫄 Š 뭕 Ş 멍 Ś 밁 Ş 밁 8 밁 Ş 밁 8 밁

Ś В Ş В Ş

```
polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Candelier, J.J., Martinez-Duncker, I., oriol, R. and Mollicone, R. Cloning expression and genomic organization of a new human alpha3-fucosyltransferase (FUT10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (19-DEC-2002) Oriol R., Glycobiology, INSERM U504, Paul Vaillant-Couturier, 94807 Villejuif, FRANCE Related sequence: AJ512465.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oriol,R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG 322
                                                                                                                                                                                                                                                                           GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                              GATTGACCTTCAACAGGAAAAGGAAATGGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                              AACTTTATAGCAACTTCAGGACAGAGCCTGATACAGATCACTACCCCATCCTGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGCCCACTGAAGCCTGATGAGAGACATGC-----TTCGCAGCTTAAGAAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGTTATCACTGAACTGGGAAATTCGGAGAATAAGGCACCAGCAGTCTCCAGTTTACACA
                                                                                             CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                            TTÁCTATTAACAAGACGTACCAGCACAGTCAGATGACAAGAGCTTTTTTGTTCTATGGTA
                                                                                                                                                                                          TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 1657)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /traibiation="wymereklijascicfaafffllvtlqvitelgnsenkapavss 
thsceptidescasciccolduc 
fetilnktyolschascikkneelysnertedtidhye fillmwseltigetcascicceduc 
fetilnktyolschascikkneelysnertedtigtestekthidheleesprinyklifheb 
itlenhtateskeelptitquestevlerdiedhen pomkoslekelapluyvolsc 
nabsdedsyvrelmchievdsygechenroleghelighesprekarsila 
fenalcedvitekkmerulgupveyfgsbesildilbleskasatlussesperelarsi 
ktiloqndgeveaylewklkgdisnerlltamkærkmgvolvtodnyidtfecmvcnru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="FUT10"
1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WENIRREEKGWLPQRWSAQVNHLNCPNLRLSGSPLQIPARAPSKRCG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product="putative alpha3-fucosyltransferase"
/protein_id="CAD59689.1"
/db_xref="GI:27368921"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="FUT10"
210. .1529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="GOA:Q8AWB5"
/db_xref="SPTREMBL:Q8AWB5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="FUT10"
/function="adds fucose in alpha1-3 linkage to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:9031"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Gallus gallus"
mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 661; DB 5;
Pred. No. 7.2e-183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1657;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlcNAc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
  682
                                                                                                                                                                                                                                                                                                                                                 459
                                                                                                                                                                                                                                                                                                                                                                                                442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               348
                                                 639
                                                                                                622
                                                                                                                                                 579
                                                                                                                                                                                             562
                                                                                                                                                                                                                                              519
                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                                                                                 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ã۷
```

RESULT 15 AC115775/c LOCUS DEFINITION	DD OD O	Q	0y 0y 0y	\$ \$ \$ \$ \$ \$	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00 00 00 00 00 00 00 00 00 00 00 00 00
15 75/c AC115775 TON Mus musculus pieces.	1480 GTTCAA 1523 TTGAA 1536 TTGAG 1536 TTGAG 1583 TTTCA 	1343 TTGAG	23 AT 40 AT 83 CT 00 CA	1043 ACTAC 	863 GGGA 880 GGGAA 923 TACGJ 1 1 940 TGCAI 983 TTTAI 983 TTTAI 1000 TCTAI	
clone	GTTCTCCTCTTCAA GTTCGAACAATCCAAGAAG TTGAACAATCCAAGAAGA TTTGAACACTCTCAAGAAGTTTTT	IGTATGGTGTGCA	GCTATGTAGAAT	CTACATCACTGAGAGTT	GACAGCTATGTICGCG	GAGGAATCACCAA TACACTGCCACGT
191072 bp RP23-125P1, WOJ	ATCCCAGCCAGAGA AAGCCCAGGCACTI	CAAGGTGTGGGC AGAGATGTGGGA CAGAAGATACCCA CTCCACCTTTGAG	GGAAGCTGAAGGG	TGAGAAGTTCTGGAGGCCACT	AGCTGATGACTTA	ABARCAAGGCATTC ICAGCAGGCATTC ICAGCACTCCGATA ICAGCCCTTCGAGACA GGTCCTTGAGACA CGCTGGTGTATGT ICAGCTGTGTATGT
p DNA linear WORKING DRAFT SEQUI	TICCCTCCAAGAGI AGGTGGCTGGTTG IIIIIIIIIIIIIIIIIIIIIIIIIII	PAATATCAGGCTTV	IGAGATCTCTAACI	GGCCACTGAAACTGGGGGTA	CATCAGAGTCGACCATCAAGTTGAACCATCAAGATTAGACCATCTGCCAAAATCCAATCTGCCAAAATCCAATCTGCAACCTTTTGAACCTTTTGAACTTTGAACTTTTGAACTTTTGAACTTTTGAACTTTTGAACTTTTGAACTTTTTGAACTTTTTGAACTTTTTGAACTTTTTGAACTTTTTGAACTTTTTTTT	
HTG 24	GTTCTCCTCTTCAAATCCCAGCCAGAGGTCCCAAGAGATGTGGATAGCAAGTT TTGAACAATCCAAGAAGATTCCAAGAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT TTGAACAATCCAAGAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT TTTGAACAGTCCAAGAAGGAAGCCTGGGCGCTGAGGCAGCTGGTGGAAAGGAACAGGAATT TTTCATCTCAAGAAGTTTTTGGGGCCCTAGTATTCAAAGGACTGATTTTCAAAAACAATAAATA	TIGAGIGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTAC	TGAGGCCTATGTAGAATGGAAGCTGAAGGTGAGATCTCTAACCAGCGACTTCTGACAG	ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG	GGGACAGCTATGTTCGCGAGCTGATGTTACATCGAGGTCGATCGTTACATGTGATGTT	
4-FEB-2003 unordered	GTT 1535 ACT 1582 1595 AATT 1595 AA 1641 	TAC 1402 GGC 1419 TTG 1462 TTG 1479 CTG 1479 GCT 1522	ы ы ы ы	ACG 1102 	GTT 922 GTC 939 GCT 982 GCT 989 ACT 999 AAG 1042 AAG 1059	TAT 699 TAT 699 TTG 742 TTG 759 AGC 802 ACC 819 ACC 879
	TITLE JOURNAL COMMENT		AUTHORS	TITLE JOURNAL		ACCESSION VERSION VERSION VERSION VERSION REFERENCE AUTHORS TITTLE JOURNAL REFERENCE AUTHORS AUTHORS
Center Contact Center Center	Wassiliev, H Wyman, D., Y Wyman, D., Y Direct Subm Submitted (Research, 3 On Feb 24, All repeats Smit, A.F.A http://ftp.	Lindblad-Tc Lindblad-Tc Macdonald, E Meldrim, J., Nguyen, C., O'Neil, D., Rachupka, A. Roman, J., SSpencer, B., Talamas, J.,	Birren, B., Anderson, S. Boguslavki, Collymore, A Diaz, J.S., Ferreira, P. Graham, L., Hall, J., H	Raymond, C., Raymond, C., Roman, J., Seaman, S., Strauss, M., Topham, K., Viel, R., Vc Zainoun, J., Direct Subh Submitted (Research, 3 3 (bases 1)	Chazaro, B., Cock, A., Coc	AC115775.5 AC115775.5 AC115775.5 MIS muscull 1 (bases : 1 (bases : 2 (bases) 3 (bases) 8 Dirren, B., Anderson, B., Anderson, B., Anderson, B., Anderson, B.,
Center code: WIBR Web Site: http:// Contact: sequence Project Center project na Center clone name	illev,H., Venkata n,D., Young,G., Zc ct Submission itted (24-FEB-200) aarch, 320 Charles eb 24, 2003 this s repeats were ident, ,A.F.A. & Green, ,/fitp_genome.wasi	h, K., I) h, K., Majo Meneus Nicol, R Oliver, Ramas chauer, Stange	Nusbau , Arac , L., B , Coo Dodge, Dodge, , Fitz Grand-	Rette Sever Subr Trave D,A., Zemb 222-MA 20 Ch	Chooke, poke, surrei, sord, sord, forto, Macon M	GI: PHASE Is (h Is
e: Bance Rwy	, Zai , Zai , Zai 2003) les S is Se denti denti washi ead 1	iu, G., F., U., F., V., F., V., F., V., F., V., F., V., F., V., V., F., V., V., V., V., V., V., V., V., V., V	m,C., hchi, H oukhga k,A., S., Do Seralo Geralo Pierre	a,R., (1) y,P., (2) y,P.,	epel,Y. p., DeAl p., Goy s., Goy n,L., H as,A., J oczky,J donald,l ewan,P., ga,V., N	2847588 1; HTGS cuse mod zoa; Ch ria; Rod 191072) aum, C. aum, C. lone RP, 19072) on, L., 1 rna, N., Brown, J.
code: WIBR e: http://www-seq.wi.mit :: sequence_submissions@c Project Information project name: L23395 clone name: 125_P_1	ataraman, V.S., V., Zainoun, J., Zainoun, J., Zeinoun, J.	r., Reils, C., Edid, A., M. r., J., Manning, J., f., Mihova, T., I. r., Norbu, C., O'C, r., Norbu, C., O'C, J., Peterson, K., amy, U., Raymond, amy, U., Raymond, amy, T., Thomann, N., Sto	m,C., Lander,E., inchi,H.M., Barna, inchi,H.M., Barna, bunkhgalter,B., Co k,A., Cooke,P., Co k,A., Cooke,P., Co Gerald,M., Gage,D plerre,N., Hafez, Hulme,W., Ilie	a,R. Rieback,M., i,M., Roy,A. Sant, Sant, Sy, P., Spencer, B., i, amanian,A., Talamanrs,M., Travis,N., wilson,B., wi,X., lek,L., Zimmer,A. alek,L., Zimmer,A. alek,R., 2002) Whitehead arles Street, Camby son(72)	P. DeArellano, K., P. DeArellano, K., P. DeArellano, K., P. Pitzhugh, W., S., Goyette, M., Grain, J., Hulme, W. Ili as, A., Kells, C., La cozky, J., Levine, R. donald, P., Major, J. Ewan, P., McKernan, J. Ewan, P., McKernan, J. K. Ba, V., Nurphy, T., N. M., C. H., O'Connor, T.	28475880 28475880 Ouse mouse) Zoa; Chordata; Cran ria; Rodentia; Sciu 191072) aum, C. and Lander, E lone RP23-125P1 191072) 191072) Dron, L., Nusbaum, C., Brown, A., Camatrata
Center code: WIBR Web site: http://www-seq.wi.mit.edu Contact: sequence_submissions@genome.wi.mit Project Information Center project name: L23395 Center clone name: 125_P_1	ataraman, V.S., Viel, R., Vo, A., Zainoun, J., Zembek, L., Zimmer, J., Zembek, L., Zimmer, Zendoun, J., Zembek, L., Zimmer, Zendoun, Zendoun, Zendoun, J., Zendoun, Z	in. , wells, C., Banders, I., Legide, G., Li, A., Mabbitt, R., M., L., M., Mabbitt, R., M., L., M., M., M., M., M., M., M., M., M., M	m,C., Lander,E., Abouelleil,A hchi,H.M., Barna,N., Bastlen, bukhgalter,B., Camarata,J., (1) cooke,P., Corum,B., DeA. k,A., Cooke,P., Corum,B., DeA. s., Dooley,K., Dorris,L., Erila Gerald,M., Gage,D., Galagan,J plerre,N., Hafez,N., Hagopian Hulme,W., Iliev,I., Johnson, Hulme,W., Iliev,I., Johnson	a.R., Rieback,M., Riley,R., Rilay,R., Riley,R., Riley,R., Roy,A., Santos,R., Schau,y,P., Spencer,B., Stange-Thoman amanian,A., Talamas,J., Tesfay,rs,M., Travis,N., Trigilio,J., Wilson,B., Wu,X., Wyman,D., Yeek,L., Zimmer,A. and Zody,M. on the season of t	pepel, Y. Colangelo, M. Collins, P. DeArellano, K., Dewar, K., Di ra, P., EtzHugh, W., Gage, D., Ga S., Goyette, M., Graham, L., Grann, L., Hulme, W., Iliev, I., Johns, as, A., Kells, C., LaRocque, K., L. Cozky, J., Levine, R., Lindblad-Toczky, J., Major, J., Marguts, N. Gwan, P., McKernan, K., Meldrim, J., Grannor, T., Naylor, J., Ng Ja, V., Murphy, T., Naylor, J., Ng Ja, V., Murphy, T., Naylor, J., Ng C.C.H., O'Connell,	28475880 1; HTGS_DRAFT. ouse mouse) zoa; Chordata; Craniata; Verteb ria; Rodentia; Sciurognathi; Mu 191072) aum,C. and Lander,E. lone RP23-125P1 191072) 191072) 191072) 191077) 191077, Nusbaum,C., Lander,E., A rna,N., Bastien,V., Bloom,T., B Brown,A., Camparata,J., Campopi
e. ₩i.	ataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. 2003) Whitehead Institute/MIT Center for Genoles Street, Cambridge, MA 02141, USA is sequence version replaced gi:28460929. dentified using RepeatMasker: en, P. (1996-1997) washington.edu/RM/RepeatMasker.html ome Center	A., Nells, C., Manders, I., Medlean, C., Audidean, C., Ar, J., Manning, J., Matthews, C., McCarthy, M., L., Mihova, T., Melnga, V., Murphy, T., Naylor, J., I., Norbu, C., O'Connor, T., O'Donnell, P., Norbu, C., O'Phunkhang, P., Pierre, N., Peterson, K., Phunkhang, P., Pierre, N., Schupback, R., Seaman, S., Severy, P., Smith, C., Thomann, N., Stojanovic, N., Stubbs, M., Travers, M., Travers, M.,	m,C., Lander,E., Abouelleil,A., Allen,N., inchi,H.M., Barna,N., Bastlen,V., Bloom,T. uukhgalter,B., Camarata,J., Chang,J., Chou k,A., Cooke,P., Corum,B., DeArellano,K., S., Dooley,K., Dorris,L., Erickson,J., Fas Gerald,M., Gage,D., Galagan,J., Gardyna,S. Plerre,N., Hafez,N., Hagopian,D., Hagos,B Hulme,W., Iliev,I., Johnson,R., Jones, Hulme,W., Iliev,I., Johnson,R., Jones,	a.R., Rieback,M., Riley,R., Rise,C., Rogov,P., a.R., Rieback,M., Riley,R., Rise,C., Rogov,P., y,P., Spencer,B., Stantos,R., Schauer,S., Schupback,R., mananian,A., Talamas,J., Tesfaye,S., Theodore,J., rs,M., Travis,N., Trigilio,J., Vassiliev,H., wilson,B., Mu,X., Myman,D., Ye,W.J., Young,G., ek,L., Zimmer,A. and Zody,M. n n n n n n n n n n n n n n n n n n n	peel, Y., Colangelo, M., Collins, S., Collymor P., DeArellano, K., Dewar, K., Diaz, J.S., Dod ra, P., Fitzhugh, W., Gage, D., Galagan, J., Ga S., Gyette, M., Graham, L., Grand-Pierre, N., In, L., Hulme, W., Iliev, I., Johnson, R., Jones as, A., Kells, C., LaRocque, K., Lamazares, R., Cozky, J., Levine, R., Lindblad-Toh, K., Liu, Gdonald, P., Major, J., Marguis, N., Matthews, C Ewan, P., McKernan, K., Meldrim, J., Meneus, L., Ga, V., Murphy, T., Maylor, J., Nguyen, C., Nico, C., Connell, P., O'Neil, D., O'Connell, P., O'Connell, P., O'Neil, D., O'Connell, P., O'Connel	ON AC115775 RAC115775.5 GI:28475880 HTG; HTGS PHASE1; HTGS DRAFT. Mus musculus (house mouse) IISM Mus musculus (house mouse) IISM Mamusla; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. ICE 1 (bases 1 to 191072) RS Birren,B., Nusbaum,C. and Lander,E. Mus musculus, Clone RP23-125P1 MIL Unpublished CE 2 (bases 1 to 191072) Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N., Boukhgalter,B., Brown,A., Camarata,J., Campopiano,A., Chang,J.,

```
FEATURES
                                                                misc_feature
                                                                                                                          misc_feature
                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
misc_feature
                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOTE: This is a 'working draft' sequence. It currently consists of 12 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequencing vector: Plasmid; n/a; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731
Consensus quality: 188135 bases at least Q40
Consensus quality: 189100 bases at least Q20
Consensus quality: 189354 bases at least Q20
Consensus quality: 189354 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insert size: 188000; agarose-fp
Insert size: 189972; sum-of-contigs
Quality coverage: 11.0 in Q20 bases; agarose-fp
Quality coverage: 10.9 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 14b.

of 14b.

of 14b.

of 100 bp

Jef 
                                                                                                                                                                                                                                                                                                                                                                                                                                                             3987.
                                                                                                                                 25078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2405.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="RP23-125P1"
                                                                                                                                                            note="assembly_fragment"
                                                                                                                                                                                              /note="assembly_fragment"
13358. .24977
                                                                                                                                                                                                                                                                                   /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="assembly_fragment'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone
      note="assembly_fragment'
.22422. .167655
                                                                                           'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     one lib="RPCI-23 Female Mouse 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1011: contig of 1011 bp in length
1111: gap of 100 bp
2304: contig of 1193 bp in length
2404: gap of 100 bp
3886: contig of 1482 bp in length
3986: gap of 100 bp
4944: contig of 958 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .3886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .2304
                                                                                                                                    .89755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            side:left"
                                                                       22321
```

```
밁
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  १
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
밁
                                                              밁
                                                                                      Ş
                                                                                                                            밁
                                                                                                                                                       Ś
                                                                                                                                                                                         В
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                     멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Sim
Matches 710;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                            27717
                                                                                                                                                                                                                                                                                                                        27897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28257
27597
                                                                                                                                                                                            27777
                                                                                                                                                                                                                                                         27837
                                                                                                                                                                                                                                                                                      1147
                                                                                                                                                                                                                                                                                                                                                     1087
                                                                                                                                                                                                                                                                                                                                                                                       27957
                                                                                                                                                                                                                                                                                                                                                                                                                                                      28017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28137
                                                                                                                                                          1267
                                                                                                                                                                                                                                                                                                                                                                                                                     1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGACTGGGCTGTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCTCTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGCTAAGAACAACCTAAGACAAAAACTGGCCCCATTGGTATATGTTCAGTCGGACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTACGCAGTACCTGGAAGGCGTGGACGTCCTGAAGTCACTCAGATACCTAGTTCCTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGTCATCACCTTATTCAACCATACGGCCACATTCAGCAGGCATTCCCACTTGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGACTGGGGGGCGCTTTTCCATGAAGAGTCCCCCAAAAACAATTATAAGCTCTTCCATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTTTCCTCCCAGGTACTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCAT
                                                                                                                                                     CAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAACCAGGAC 1326
                                                                                                                                                                                          TATGACGATGGGTTGTATGAGACCTATGTAGAGTGGAAGCTAAAGGGGCAAGATCTCTAAC
                                                                                                                                                                                                               TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC
                                                                                                                                                                                                                                                        ATTCTGGTGTCGGAATTCTCTCACCCCAGAGAGCTGGCGAGCTTCATTAGGAGACTGGAT
                                                                                                                                                                                                                                                                                        ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT
                                                                                                                                                                                                                                                                                                                        GIGCCCGIGIATTACGGAICCCCACCAICGCCGACIGGCTICCAAGTAACCGAAGCGCC
                                                                                                                                                                                                                                                                                                                                                       GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT 1146
                                                                                                                                                                                                                                                                                                                                                                                     AATGCGGTCTGTGACGATTACATCACAGAGAAGTTCTGGAGACCACTGAAACTGGGGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                    AATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTA 1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGATGCTGATGCTTTCTACAGAGTCATTGCCCAGTATAAGTTCATCCTGGCCTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTATGGCGAGTGTTTACAGAACAGAGATCTTCCCCAGCAGCTGAAAAACCCCGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCCACCATCAGACAGGGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
 CAGGAGCAGG
                                CAGGAAAAGG 1396
                                                              AACTACATTGACTCGTTTGAG
                                                                                           AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGGCTAATATCAGGCTT
                                                                                                                            CAGCGGCTTCTGACAGCTCTCAATGAACGGGAGTGGGGGTGTGCAGGACATTAACCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="assembly_fragment"
167756. .191072
/note="assembly_fragment
clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vector_side:right"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37.5%;
 27588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 626; DB 2;
Pred. No. 2.4e-172;
0; Mismatches 140;
                                                                  retategreteccecaegeteteccaaacaetaecte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 191072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                           27778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             726
                                                                                               1386
                                                                                                                             27658
                                                                                                                                                                                                                            1266
                                                                                                                                                                                                                                                                                                                          27838
                                                                                                                                                                                                                                                                                                                                                                                                                                                      27958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           909
                                                                27598
                                                                                                                                                                                            27718
                                                                                                                                                                                                                                                                                           1206
                                                                                                                                                                                                                                                                                                                                                                                       27898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28378
```

Search

completed:

September 13,

2004,

00:41:47

Job time : 4450.98 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                        a
                                                                                                                                                                                                                                                                                                                       a
   score greater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.
                                                                                                                                                                                                                                                                                                                                                                         1665.
 1385.8
416.4
416.4
313.8
323.8
323.8
323.8
323.8
130.8
180.8
1109.8
1162.6
1162.6
1162.6
1162.6
1162.6
567.6
555.2
                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ب
ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-080-960-1
1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3373863 segs, 2124099041 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     September 12, 2004, 16:57:53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   N_Geneseq_29Jan04:*
1: geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     geneseqn2001bs:*
geneseqn2002s:*
geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  geneseqn2003bs:*
geneseqn2003cs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             geneseqn1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   geneseqn2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                                           Length
   GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                     ABX57833
ABC30795
ABA65776
ABA05334
ABA05333
ABL07657
ACC62479
ACC62499
ACC62494
ACC62444
ACC6244
ACC624
A
                                                                                                                                                                                                                                                                                                   ABN78606
ADC32194
AAL34845
                                                                                                                                                                                                                                                                                                                                                     ABK53075
AAH64767
ADC30307
                      ABV15942
ABV45741
                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 i3 ; Search time 471.373 Seconds
(without alignments)
15041.697 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6747726
                Abn78606
Adc32194
Adc32194
Adc321983
Abx5783
Abc5783
Abs67785
Aba05334
Aba05333
Abl07657
Acc62499
Acc62500
Abx11711
Aast11711
Aast11711
Aast11711
Aast11712
Abx11713
Abx11711
                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                          Abk53075
Human nec
Human nov
Human fuc
Human fuc
Human sec
DNA encod
Human sec
DNA encod
Human a du
Drosophil
Novel huma
Human pro
Human pro
```

	AC ABK	RESULT 1 ABK53075 ID ABK53075		45	4 4 4 4	4.	c 41	4.	39	38	37	36	S S	34	33	32	ω	a 30	N	c 28	27	26	25	24
13-AUG-2002 (first entry)	ABK53075;	53075 st		9.	39. 6	4.	40	40	40	•	0		0			40.4		•	•		N	43.4	44	44
(fir		andard			, c , 4		2.4									•	•		Մ		•			
st entry)		standard; cDNA;		234	234	62	426	368	150	582	582	582	582	356	2364	1457	17	8	S U	506	50	2000	779	432
2 3		16		Q	տ 4	. 7	7	4.	Q	9	7	7	ω	4	w	w	თ	7	7	ഗ	ω.	7	w	σı
))))) ;		69 BP.	ALIGNMENTS	ABS68178	AAS29038	ACC51152	ABX48652	AAS60046	ABV96763	ADC20222	ADA43948	ADA98064	AAC93502	AAI80356	AAZ33323	AAA63482	ABS64919	ADA71938	ABQ77400	ABQ41710	ABQ41711	ADA71938	F161	ABV56837 .
				Abs68178	Aas29038	Acc51152	Abx48652	Aas60046	Abv96763	Adc20222	Ada43948	Ada98064	Aac93502	Aai80356	3323	3482	Abs64919	Ada71938	ŏ		Ξ	æ	6193	568
				CDNA	CDNA enco		Bovine	Human	Human	Human		Human	Human	Human pol	Human sec	DNA encod	Soybean r	Rice	Human	Oligonucl	Oligonucl	Rice gene	Human pro	Human pro

```
Human; gene; ss; 80090; fucosyl transferase; cancer; Grave's disease; seven transmembrane receptor; Rho GrPase-activating protein; RhoGAP; cardiovascular disorder; haematopoieteic disorder; brain disorder; blood vessel disorder; metabolic disorder; liver disorder; psoriasis; platelet disorder; leukaemia; cardiac hypertrophy; Crohn's disease; myocardial infarction; rheumatic fever; multiple sclerosis; asthma; rheumatod arthritis; diabetes mellitus; blood vessel disorder; Kaposi sarcoma; Alzheimer's disease; hormonal disorder.
                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                         25-APR-2002.
                                                                                                                                                                                                                                WO200232962-A2
                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                      /product= "Human 80090 protein"
```

19-OCT-2001; 2001WO-US048307

20-OCT-2000; 2000US-0241992P. 20-OCT-2000; 2000US-0242038P. 20-OCT-2000; 2000US-0242040P. 23-OCT-2000; 2000US-0242637P.

(MILL-) MILLENNIUM PHARM INC

Glucksmann MA, Meyers ×

WPI; 2002-463309/49. P-PSDB; AAU97908.

Novel 80090, 52874, 52880, 63497, and 33425 polynucleotides for preventing or treating e.g. cancer, cardiovascular, hematopoietic or

```
B
                                                            Ś
                                                                                               밁
                                                                                                                  Ş
                                                                                                                                                    B
                                                                                                                                                                       δ
                                                                                                                                                                                                         B,
                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                              DЪ
                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                    B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC This invention relates to the DNA and protein sequences of novel isolated CC polynucleotides 80090, 52874, 52880, 63497, or 33425 encoding novel CC fucosyl transferase, seven transmembrane receptor, or Rho GTPase-CC activating protein (RhoGAP) family members. The DNA and protein sequences of the invention are useful for identifying a compound capable of CC treating a disorder by aberrant expression of the nucleic acid or the CC diagnosis. The invention also comprises a method for traeating a disorder cusing a modulator of the proteins activity. This method is useful for CC treating breast, ovarian, prostate, colon, or lung cancer, heart, CC cardiovascular (including endothelial cell), haematopoieteic, blood coversel and brain disorders. It is also useful in treating pain and CC protein sequences are also useful in treating point and CC protein sequences are also useful in treating proliferative disorders (e.g. acute leukaemia), cardiovascular disorders (e.g. cardiac CC hypertrophy, myocardial infarction, rheumatic fever), endothelial cell disorders (e.g. psoriasis, Grave's disease, rheumatoid arthritis), CC haematopoietic disorders (e.g. Alzheimer disorders (e.g. Kaposi sarcoma), CC degenerative disorders (e.g. Alzheimer disease), and hormonal disorders. The present sequences to identify other family members or related sequences. The present sequence crepresents the cDNA sequence encoding the human 80090 protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 1667; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1669
                                                                  481
                                                                                               421
                                                                                                                                                     361
                                                                                                                                                                               361
                                                                                                                                                                                                           301
                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
AATTCATTTCTTAAGAAAGAATTGGACCTTCAACAGGAAAAGAAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                                                         CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACGCGTCCGCTCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACGCGTCCGCTCTGCTCTAGTGTTTGACTTTTGGCGTCTCAGGTGATCCATGACTTTT
                                                         AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGGAGACTGGGGAGGTTAGGCCAA
                                                                                                                                                                                                           TTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                             TTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                                                                TTTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAAGCCAATATAATTTCTTACTCCTTCTGGAGTGCTTGGCTTTGGCTTTCACTCAGTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAAGCCAATATAATTTCTTACTCCTTCTGGAGTGCTTGGCTTTCACTCAGTGGTTT
                                                                                                                                                     AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВÞ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.8%;
99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1665.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G; 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                480
                                                                                                                            480
                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                          180
              600
                                           540
                                                                    540
                                                                                                                                                     420
                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                      В
                                                                                                            멍
                                                                                                                                                              밁
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                    Š
                                                                          Ş
                                                                                                                                 Ϋ́
                                                                                                                                                                                        Ş
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                      1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                            1501
                                                                                                                                        1501
                                                                                                                                                                                              1441
                                                                                                                                                                                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                     CAGGACAATTACATCGATGCATTTGAGTGTATGAGTGTGCACCAAGGTGTGGGCTAATATC
    rececagaececacaererrrectricicaecaerecegaerecaecrireaecrerre
                                                                                                                                                                                     TGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                        AGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                            AGGCTTCAGGAAAAGGGCCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                                                                                                                      TCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                            TCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                             CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                               CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTGAGAATGCAGTTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATCACTTACATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1620
                                                                                                                                                                    1500
                                                                                                                                                                                                                          1440
                                                                                                                                                                                                                                                      1440
                                                                                                                                                                                                                                                                                                                                                                  1320
                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                               1560
                                                                                                                                        1560
                                                                                                                                                                                                                                                                                 1380
                                                                                                                                                                                                                                                                                                                                                                                                                         1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
```

```
RESULT 2
AAH64767
ID AAH6
XX AAH6
XX AAH6
XX AAH6
XX AAH6
XX Huma
XX Huma
XX Huma
XX Homo
XX H
                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                   diseases associated with inappropriate GENSET gene expression. For example, they be used to treat disorders associated with decreased GENSET gene expression by rectifying mutations or deletions in a patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense nucleic acid molecules may be administered to down regulate GENSET expression. The sense and antisense nucleic acids may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy. The GENSET polypeptides may be used as antigens in the production of antibodies and in assays to identify modulators (agonists and antagonists) of GENSET polypeptide expression and activity. The present sequence is a GENSET nucleic acid of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to full length GENSET human nucleic acids encoding potentially secreted proteins. The nucleic acids and the polypeptides they encode may be used in the prevention, treatment and diagnosis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety of diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                  Sequence 1942 BP; 545 A; 460 C; 462 G; 475 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 7; Page 606-607; 921pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-1999;
06-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-DEC-2000; 2000WO-IB001938.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200142451-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; secreted protein; gene therapy; vaccine; treatment;
GENSET; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human secreted protein cDNA, SEQ ID NO: 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH64767 standard; cDNA; 1942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-SEP-2001
                                                         454
                                                                                                                                                                                                 118
                                                                                                                                                  394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-367870/38
                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAG89164.
                                                                                           CCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAAC 237
       ACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAG
                                                                                                                                               TTTCTGCTTGTCACACTCCAGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 453
                                                                                                                                                                                       TTTTTTTTTTTTTCTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 177
                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0169629P
2000US-0187470P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                  90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bougueleret L,
                                                                                                                                                                                                                                           ٥,
                                                                                                                                                                                                                                                                  Score 1517.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jobert
                                                                                                                                                                                                                                                                                        DB 5;
                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ß
                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                      Length 1942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diagnosis;
                                                                                                                                                                                                                                         1.
                                                                                                                                                                                                                                           Gaps
                                                    513
                                                                                                                  8
                                                                                                                                                                   맑
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                       맑
                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
1318 AACCAGGACAATTACATCCATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAAT
                                                                                                                                                                   1474
                                                                                                                                                                                                                                                                                                            1138
                                                                                                                                                                                                                                                                                                                                                                                                     1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     514
                                                                                                             ATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAA 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATC
                                                                                                                                                                                                      CGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAG 1257
                                                                                                                                                                                                                                                               AAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGA
                                                                                                                                                                                                                                                                                                                                                                                              CTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAAC 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA 1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTAATTCATTTCTTAAGAAAGAAGGAITGACCTTCAACAGGAAAAAGGAAAATGGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTC
                                                                                                                                                                   CGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGT-AG
                                                                                                                                                                                                                                                                                                            AAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGA 1197
                                                                                                                                                                                                                                                                                                                                                           CTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTCATAAACCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACAGCTACCCCATTATGCTCTGGTGGTCCCCCCCTGACGGGGGAGACTGGGAGGTTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACAGCTACCCCATTATGCTCTGGTGGTCCCCCCCTGACGGGGGGAGACTGGGAGGTTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCAC 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTG
                                                                                                                                                                                                                                                               1473
                                                                                                                                                                   1532
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1353
                                                                          1592
                                                                                                                                                                                                                                                                                                                                                           1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  573
```

뭕

밁 Ş

Ś

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                         Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet discorder; wound; burns; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thipmendolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic;
The invention relates to 971 novel human cDNA sequences (ADC29919-ADC31889) and the polypeptides they encode (ADC30890-ADC31860). The invention also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression vectors and host cells comprising a nucleic acid of the invention; the
                                                                                                                                                                                                      Tang TY, Zhang J, Ren F, X
Zhou P, Ghosh M, Wang D, M
Haley-Vicente D, Drmanac RT;
                                                                                                               New polymucleotide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or
                                                                           Claim 1;
                                                                                                                                                                                                                                                                                24-SEP-2001; 2001US-0324631P
                                                                                                                                                                                                                                                                                                           24-SEP-2002;
                                                                                                                                                                                                                                                                                                                                     10-APR-2003
                                                                                                                                                                                                                                                                                                                                                            WO2003029271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human novel cDNA sequence, SEQ ID NO:389.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADC30307 standard;
                                                                                                                                                                                                                                                          (-BSYH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1438
                                                                                                                                                                  2003-371981/35
DB; ADC31278.
                                                                                                                                                                                                                                                         HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAAT 1652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGCTGGTTGATAGGAATCAAAAACTTTTCATCTCAAGAGTTTTTGGGGCCCTAGTATTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACCCGGACTCCACCTTTGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGGCCTAGTATTCAAG
                                                                           ID NO 389; 1185pp; English
                                                                                                                                                                                                                                                                                                           2002WO-US030474.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                 chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2304
                                                                                                                                                                                                                                                                                                                                                                                                              8; gene;
                                                                                                                                                                                                                   Xue AJ, Zhao QA,
Ma Y, Asundi V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫈
                                                                                                                                                                                                                    Wang J, Wang Z,
                                                                                                                                                                                                                    Wehrman Weng G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1712
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멂
                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                       5
                                                  밁
                                                                       S
                                                                                                       밁
                                                                                                                          Š
                                                                                                                                                       밁
                                                                                                                                                                             Ś
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2304 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1390;
                                                       912
                                                                                                                                  679
                                                                                                                                                           792
                                                                                                                                                                                 619
                                                                                                                                                                                                                                   559
                                                                                                                                                                                                                                                                                       499
                                                                                                                                                                                                                                                                                                                                                                                                                                   319 CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                             GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                      GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCA
                                                                      TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTTGCAGTCCAAAAAC 798
                                                                                                        GTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAAGCTCTTTCATAAACCAGTGATCACC
                                                                                                                                                                            GTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACC
                                                                                                                                                                                                           GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                            TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                           TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                               regregrecececreaceeeeeeaeacregeaeerraeeeeaarereeaeeaeerrer
                                                                                                                                                                                                                                                                                                                                TGGTGGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                  GAAGGATTGACCTTCAACAGGAAAAGAAATTGGAATTTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAA
        AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   milarity 99.5%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

971

1031

738

911

678

851

618

731 558

791

671

498

611 438 551 378 491 cc against a polypeptide of the invention; an antibody cc against a polypeptide of the invention; an detecting polypucleotides or polypeptides of the invention; and methods of identifying a compound which binds to a polypeptide of the invention. The cc invention further discloses methods of peventing, treating or and/or monoclonal antibodies for carrying out the methods of the invention of control of the invention of control of the polypucleotide probes corresponding to the cDNA sequences of the invention of control sequences corresponding to the cDNA sequences of the invention of control sequences corresponding to the cDNA sequences of the invention of control sequences corresponding to the cDNA sequences of the invention of classification of mutations responsible for genetic disorders or other creating diseases and polypeptides of the invention are control in disponstics, drug screening, forensis, gene mapping, in the case and products dependent on DNA and amino acid sequences. They are considered to the recombinant production of a process. Alzheimer's clistates and other neurodegenerative diseases, anatomica platelet care also useful in generating antibodies, as molecular weight markers, care also useful in generating antibodies, as molecular weight markers, care also useful in generating antibodies, as molecular weight markers, contained human cDNA sequence of the invention of a procents a specifically collaimed human cDNA sequence of the printed specification, but was cobatained in electronic format directly from WIPO at

639 A; 521 C; 535 G; 609 T; 0 U; 0 Other; Score 1385.8; Pred. No. 0; 0; Mismatches DB 7; 9; Length 2304; Indels o ,-Gaps

```
Ş
                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
Human; ORF; open reading frame; ORFX; drug screening; diagnosis; disease monitoring; cytokine; cell proliferation; cell differentiation; immune modulation; haematopoiesis regulation; tissue growth; angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic; thrombolytic; tumour inhibition; bodily characteristic; fertility;
                                                                                                         Human ORF3553 cDNA, SEQ ID NO:7105.
                                                                                                                                                                                                                  ABN78606 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       919
                                                                                                                                                                                                                                                                                                                                       GAATGAAACAGAAAAAA 1655
                                                                                                                                                                                                                                                                                                                                                                                          AACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCC 1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCCAGAGGCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAATTITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCA 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT 1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCCAGCCTCTATGGATGCCGAT 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                         1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1458
                                                                                                                                                                                                                                                                                                                                                                        1811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1093
```

```
behaviour; cancer; proliferative disorder; neurological disorder; cardiovascular disease; immune system disorder; organ transplantation; tissue growth disorder; tissue regeneration disorder; diabetes mellitus; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; vasotropic; antipsoriatic; antidiabetic; cytostatic; nootropic; neuroprotective; antiatherosclerotic; anticoagulant; thrombolytic; cardiant; hypotensive; antithyroid; antiinflammatory; immunomodulator; dermatological; analgesic; virucide; antibacterial; fungicide; gene; ss.
```

WO200190366-A2

24-MAY-2001; 2001WO-US017076

24-MAY-2000; 2000US-0206690P

(CURA-) CURAGEN CORP

WPI; 2002-106200/14.

Novel human polypeptides and polynucleotides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, hyperproliferative disorders and disorders related to organ transplantation.

Claim 1; Page 2022; 2508pp; English.

Sequences ABP31028-ABP35561 represent 4534 novel human proteins classinated ORF (open reading frame) 1.4534, and sequences ABN75054-62 ABN79587 represent cDNAs encoding them. The invention also encompasses CC polypoptides at least 80% identical to the ORF1-ORF4334 (collectively CF referred to as ORFX) proteins, polymucleotides at least 85% identical to the ORF1-ORF4334 (collectively CF PREX nucleic acid sequences, vectors and host cells comprising ORFX CC polymucleotides, the recombinant production of ORFX proteins, antibodies and CC polypoptides, methods of screening for modulators of ORFX proteins, antibodies and CC polypoptides, methods of screening individuals for a predisposition to an CC ORFX-associated disorder. The ORFX proteins of the invention have a wide CC range of biological activities, such as cytokine, cell proliferation, cell differentiation, immune modulation, hemantopolesis regulation, tissue growth, angiogenesis, activin or inhibin activity, chemotactic/ CC chemokinetic activity, hemostatic activity, thrombolyvic activity, cell and antiinflammatory activity, thrombolyvic chemotactic/ CC ordination and antibodies may be used in the treatment of cancers, contained and antibodies may be used in the treatment of cancers, cardiovascular diseases, immune system disorders, disorders related to cytoan transplantation, disorders of tissue growth and regeneratial, control to acids and activity, and the province of primers and probes, in the decertion of ORFX genomic sequences, in the decertion of ORFX genomic sequences or transcripts, in the identification and cloning of homologous countries of the probes, in the decertion and cholesterol ester sequences, in the decertion of ORFX genomic sequences contained by viral, bacterial, contained and activity and bacterial, and in formal and cholesterol ester sequences of primers and probes, in the decertion of ORFX genomic sequences contained by viral, bacterial, contained and activity of ORFX and the produce transgenic animals contained by contained and conta

Sequence 597 BP; 171 A; 145 C; 124 G; 157 T; 0 U; 0 Other;

Query Match Best Local Sin Matches 594; Similarity 34.8%; Score 581.2; Pred. No. 1.3e 0; Mismatches 0 1.3e-150; ches 3; DB 6; Length 597; Gaps

```
RESULT 5
ADC32194/c
ID ADC32194;
XX ACC32194;
XX ACC32194;
XX DE Human novel cDNA con
XX Human; diagnostic; d
KW biodiversity assessm
KW neurodegenerative di
KW biodiversity assessm
KW neuroprotective; ant
KW molecular weight man;
KW gene therapy; chromo
XX Homo sapiens.
XX WO2003029271-A2.
XX PD 10-APR-2003.
XX PD 10-APR-2003; 2002Wo-
XX 24-SEP-2001; 2001US-
XX PA (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dβ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                               Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet disorder; wound; burns; ulcers; osteoporosis; autoimnune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary;
                                                                                                                                                                                      antiulcer; osteopathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1044
                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAGAAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATT 1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCATGAAGAGTCCCCG-AAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTCACCCCAGGGAACTGGCAAGTTATATCAGACGACTGGATTCTGATGACAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTATAGGATCATTGCACAGTATÁAGTTTATCCTAGCTTTTGAGÁATGCAGTTTGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAG
                                            2001US-0324631P
                                                                     2002WO-US030474
                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                        chromosome
                                                                                                                                                                                                                                                                                         contig sequence, SEQ ID
                                                                                                                                                                                                                                                                                                                                                                        CDNA;
                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                     immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                                        ΒP
                                                                                                                                                                                                                                                                                             NO:2276.
                                                                                                                                                                                      antiinflammatory;
                                                                                                                                                                                      cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                         597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                             8
                                                                                                                                                                          밁
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                   8
                                    5
                                                                     g
                                                                                          S
                                                                                                                                                                                                                                                                                  Matches 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer.
                                                                                                                                                                                                                                                                                                                                  Sequence 447
                                             1034
                                                                                                974
                                                                                                                         327
                                                                                                                                                                           387
                                                                                                                                                                                                    854
                                                                                                                                                                                                                               447
                      TTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTG
```

```
Tang
Zhou
      P, TY
     Zhang J,
Ghosh M,
J, Ren F,
, Wang D,
Drmanac F
 뭐;
       Xue Ac
Ma Y,
             ΑJ,
       , Zhao
Asundi
       Ų,'
       Wang
       Wang J, Wang Z,
              Wehrman
              H
```

New polynuclectide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or

SEQ ID NO 2276; 1185pp; English

CC ADC30889) and the polypeptides they encode (ADC30890-ADC31860). The cinvention also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression excepts and host cells comprising a nucleic acid of the invention; the crecombinant production of a polypeptide of the invention; an antibody against a polypeptide of the invention; an extended of identifying a compound which binds to a polypeptide of the invention. The cinvention further discloses methods of peventing, treating or and/or monoclonal antibodies for carrying out the methods of the invention; and methods of compound which binds to a polypeptide of the invention. The conting a medical condition, kits comprising polynuclectide probes and/or monoclonal antibodies for carrying out the methods of the invention; methods for the identification of compounds that modulate the country sequences corresponding to the cDNA sequences of the invention are conting sequences corresponding to the cDNA sequences of the invention are conting sequences of the polypeptides encoded by the contings (ADC32628 cuseful in diagnostics, drug screening, forensics, gene mapping, in the cuseful in diagnostics, drug screening, forensics, gene mapping, in the cuseful in diagnostics, drug screening, forensics, gene mapping, in the cuseful in diagnostics, drug screening, forensics, gene mapping, in the cuseful in diagnostics, drug screening, forensics, gene mapping, in the cuseful in diagnostics, and animo acid sequences. They are cuseful diseases such as Parkinson's disease, Alzheimer's cuseful and products dependent on DNA and amimo acid sequences. They are cuseful and animo acid sequences. They are cuseful animolated processis, anaemia, platelet cuseful animolated processis and cuseful animolated processor cuseful animolated processor cuseful animolated processor cuseful ani

BP; 113 A; 103 C; 101 G; 130 T; 0 U; 0 Other;

9

Similarity CCGATGGCTTTTATACGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAG TTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTG CCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAG GTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATG GTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATG CATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATG CATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAGTTCCTATG Conservative 24.9%; 0 Score 416.4; DB 9; Pred. No. 5.9e-105; 0; Mismatches 1; Length 447; Indels 0 Gaps 1033 1093 973 388 208 328 913

```
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
  16-MAR-2000
17-MAR-2000
17-MAR-2000
19-MAY-2000
07-JUN-2000
07-JUN-2000
07-JUL-2000
07-JUL-2000
11-JUL-2000
11-JUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-JAN-2000;
04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulicer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-JAN-2001; 2001WO-US001338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200155367-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                musculoskeletal system; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAL34845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAL34845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human musculoskeletal system related polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard; cDNA; 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATCAGAATTTTCTCACACCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA 1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTG
  2000US-021748PP
2000US-0217496PP
2000US-0217496PP
2000US-0220964PP
2000US-0220964PP
2000US-0225513PP
2000US-0225514PP
2000US-0225267PP
2000US-0225267PP
2000US-0225268PP
2000US-0225276PP
2000US-0225276PP
2000US-0225275PP
2000US-0225275PP
2000US-022575PP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0198123P.
2000US-0205515P.
2000US-0209467P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0214886P.
2000US-0215135P.
2000US-0216647P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0180628P
2000US-0184664P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0186350P
2000US-0189874P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0179065P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0190076P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
      01-SEP-2000
05-SEP-2000
06-SEP-2000
06-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
114-SEP-2000

2000US-0239449P
2000US-023941P
2000US-023941P
2000US-0231243P
2000US-0231243P
2000US-0231243P
2000US-0231243P
2000US-0231243P
2000US-02312414P
2000US-02312414P
2000US-02312414P
2000US-02312414P
2000US-02312414P
2000US-02312411P
2000US-02312410P
2000US-02312410P
2000US-02312410P
2000US-02312410P
2000US-0231241P
2000US-0231241P
2000US-0231241P
2000US-0231241P
2000US-0241221P
2000US-0246523P
2000US-0246533P
```

```
8
                                                            밁
                                                                                          δ
                                                                                                                                        망
                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                   The invention relates to novel genes (AAL37669-AAL37666) and proteins (ABB03087-ABB04109) associated with the musculoskeletal system useful for preventing, treating or ameliorating medical conditions e.g. by protein cor gene therapy. The genes are isolated from a range of human tissues (disclosed in the specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the cartenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, (lung, or urogenital; (b) immune disorders e.g. Addison's disease, altergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, (c) arthritis and ulcerative colitis; (c) cardiovascular disorders such as urocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infections. Note: The sequence data for this patent did not form part of the printed specification, but was considered in electronic format directly from WIPO at
                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17.NOV-2000;
17.NOV-2000;
17.NOV-2000;
17.NOV-2000;
01.DEC-2000;
05.DEC-2000;
05.DEC-2000;
06.DEC-2000;
06.DEC-2000;
08.DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated polypeptide for treating, preventing and/ or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g. diagnosis.
                                                                                                                                                                                                                                                                                                 Sequence 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-451937/48.
P-PSDB; ABB03263.
                                                                                                                                                                                                                                                                                                                                     ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 187; 781pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HUMA-) HUMAN GENOME SCI INC
                                                                                                  754
                                                                                                                                                                              694 GCCACGTTCAGCAGGCATTCCCCACTTGCCACTAACTACCCCAATACTTGGAGAGCATTGAA
                                                               61
                                                                                                                                          -ب
                                                                                                                                                                                                                                           Similarity
CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACAGGGACAGCTAT
                                                            GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAAA
                                                                                        GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAGA
                                                                                                                                        GCCACGTTCAGCAGGCATTCCCACTTGCCACTACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0249244P,
2000US-0249245P,
2000US-0249265P,
2000US-0249299P,
2000US-0249299P,
2000US-0249299P,
2000US-0259391P,
2000US-0251030P,
2000US-0251198P,
2000US-02511868P,
2000US-0251868P,
2000US-0251869P,
2000US-0251989P,
2000US-0251869P,
2000US-0251869P,
2000US-0251999P,
2000US-025199P,
2000US-02519P,
200US-02519P,
200US-02
                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                 BP; 107 A; 90 C; 84 G;
                                                                                                                                                                                                                                    19.4%;
                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                       Score 323.8; DB 4;
Pred. No. 2.7e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SM;
                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                 96 T; 0 U; 1 Other;
                                                                                                                                                                                                                      æ
                                                                                                                                                                                                                                                            Length 378;
                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                      υ
••
                                                                                                                                                                                                                    Gaps
                       873
                                                            120
                                                                                                    813
                                                                                                                                        60
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
04-FEB-2000; 2000US-0180628P.
28-JUN-2000; 2000US-021686P.
07-JUL-2000; 2000US-021684P.
11-JUL-2000; 2000US-0216880P.
11-JUL-2000; 2000US-0217487P.
11-JUL-2000; 2000US-0218290P.
14-JUL-2000; 2000US-0218290P.
14-JUL-2000; 2000US-0229963P.
26-JUL-2000; 2000US-0229964P.
14-AUG-2000; 2000US-0224518P.
14-AUG-2000; 2000US-0225266P.
14-AUG-2000; 2000US-0225268P.
14-AUG-2000; 2000US-0225270P.
14-AUG-2000; 2000US-0225270P.
14-AUG-2000; 2000US-0225277P.
14-AUG-2000; 2000US-022578P.
14-AUG-2000; 2000US-022578P.
14-AUG-2000; 2000US-022578P.
14-AUG-2000; 2000US-022578P.
                                                                                                                                                                                                                                                                                                                                                            31-JAN-2000; 2000US-0179065P.
                                                                                                                                                                                                                                                                                                                                                                                                    17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                        10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2002147140-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-FEB-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABX57833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABX57833 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                    2001US-00764877
```

ABX57833;

26-FBB-2003 (first entry)

CDNA encoding novel human musculoskeletal system antigen #177.

Gene; ss; musculoskeletal system antigen; cancer; metastasis;
re-vascularisation; thrombosis; arteriosclerosis; mineral content;
cardiovascular condition; wound; injury; burn; angiogenesis; ulcer;
post-operative tissue repair; limb regeneration; neuronal growth;
neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;
AIDS-related complex; chondrocyte growth; bone regeneration;
periodontal regeneration; tissue transport; bone graff; skin aging;
keratinocyte growth; hair loss; melanocyte growth; cell proliferation;
cell growth; organ transplant; cell differentiation; body height;
hair colour; eye colour; skin; percentage of adipose tissue;
pigmentation; cosmetic surgery; metabolism; biornhythm; caricadic rhythm;
depression; tendency for violence; pain; reproductive capability;
hormone level; endocrine level; appetite; libido; memory; stress;
tcarbohydrate content; vitamin content; cofactor content;
nutritional component.

```
CC Sequence encoding musculoskeletal system associated polypeptides useful CC sequence encoding musculoskeletal system associated polypeptides useful CC for detecting disorders, e.g., cancer or cancer metastases, in animals or humans. The nucleic acid: stimulates re-vascularisation of ischaemic CC tissues associated with conditions; treats wounds due to injuries, CC and other cardiovascular conditions; treats wounds due to injuries, CC burns, post-operative tissue repair, and ulcers; stimulates angiogenesis and limb regeneration; stimulates neuronal growth; can treat and prevent CC enditions, such as, Alzheimer's disease, Parkinson's disease, and AIDS-CC related complex; stimulates chondrocyte growth, thus they can be used to enhance bone and periodontal regeneration and aid in tissue transports or bone grafts; prevents skin aging due to surburn by stimulates or scrivate hair-forming cells and promotes melanocyte growth; stimulates CC growth and differentiation of hematopoietic cells and bone marrow cells considered the supporting cell culture of primary tissues; cc induces tissue of mesodermal origin to differentiate in early embryos; concerted surgery); modulates mammalian metabolism; changes mammal's metal cc state or physical state by influencing biorhythms, caricadic rhythms, capabilities, hormonal or endocrine levels, appetite, libido, memory, or capabilities, hormonal or endocrine levels, appetite, libido, memory, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-AUG-2000; 2000US-0228924P.
01-SEP-2000; 2000US-022934SP.
01-SEP-2000; 2000US-022934SP.
01-SEP-2000; 2000US-022934SP.
01-SEP-2000; 2000US-022954SP.
05-SEP-2000; 2000US-0229513P.
08-SEP-2000; 2000US-0234274P.
21-SEP-2000; 2000US-0234274P.
21-SEP-2000; 2000US-0234274P.
21-SEP-2000; 2000US-0235834P.
22-SEP-2000; 2000US-023637P.
23-SEP-2000; 2000US-023637P.
23-SEP-2000; 2000US-0236369P.
23-SEP-2000; 2000US-0236370P.
23-SEP-2000; 2000US-0236370P.
23-SEP-2000; 2000US-023638P.
23-SEP-2000; 2000US-023638P.
23-SEP-2000; 2000US-023638P.
23-SEP-2000; 2000US-023638P.
23-SEP-2000; 2000US-0237037P.
23-SEP-2000; 2000US-023703P.
23-OCT-2000; 2000US-023703P.
02-OCT-2000; 2000US-023703P.
03-OCT-2000; 2000US-023703P.
03-OCT-2000; 2000US-023703P.
03-OCT-2000; 2000US-023703P.
03-OCT-2000; 2000US-0234607P.
01-NOV-2000; 2000US-0234607P.
01-NOV-2000; 2000US-0231868P.
08-DEC-2000; 2000US-0251866P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated nucleic acid molecules encoding musculoskeletal system associated polypeptides, useful for detecting disorders, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ROSE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID NO 187; 321pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BARA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2003-128199/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ROSEN C A.
RUBEN S M.
BARASH S C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABU12557.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SC;
```

```
RESULT 8
ADC30780
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8888888¥&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antigen. Note: The sequence data for this patent did r
printed specification, but was obtained in electronic
from the US patent office at
ftp.seqdata.uspto.gov/sequence.html?DocID=20020147140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stress; increases or decreases storage capabilities, fat content, lipid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional components. This sequence encodes a novel human musculoskeletal system antigen. Note: The sequence data for this patent did not form part of the
                                                                                                                                                                                                                Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; plattelet discorder; wound; burns; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 378 BP; 107 A; 90 C; 84 G;
                                                                                                                                                                                                                                                                                                                                                  Human novel cDNA sequence, SEQ ID NO:862.
                                                                                                                                                                                                                                                                                                                                                                                   18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADC30780 standard; cDNA; 1061
                                 24-SEP-2001; 2001US-0324631P
                                                                  24-SEP-2002; 2002WO-US030474
                                                                                                                                   WO2003029271-A2.
                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                    ADC30780;
(HYSE-) HYSEQ INC
                                                                                                   10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1054 GAGAAGTTCTGGAGGC 1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  694 GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      754 GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       363;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACCTCCCTCAGCAGCTGAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     сттестссестветельтельсьетсьвастеленсскогодосьтельностьт
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A-TGCACAGTATAAGTTTATCCTAGCTTT---GAGATGCATTTGTGATGA-NACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTGCTCCGCTGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                     chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     but was obtained in electronic format directly
                                                                                                                                                                                                    8; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 323.8; DB 7
Pred. No. 2.7e~79;
D; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
•••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ر.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
```

```
CC vectors and host cells comprising a nucleic acid of the invention; the creambinant production of a polypeptide of the invention; an antibody cc against a polypeptide of the invention; a method of detecting compounds which binds to a polypeptide of the invention; and methods of cleantifying a compound which binds to a polypeptide of the invention. The clinton further discloses methods of peventing, treating or and/or monoclonal antibodies for carrying out the methods of the cand/or monoclonal antibodies for carrying out the methods of the contribution; methods for the identification of compounds that modulate the contribution; methods for the polypublides and/or monoclonal antibodies for carrying out the methods of the invention compression or activity of the polypublides and or polypeptide; and 767 contribution are presented to the contribution are contributed. The nucleic acids and polypeptides of the invention are constituted in diagnostics, drug screening, forensics, gene mapping, in the contribution are constituted in the polypeptides of the invention are constituted by and producing many other types of data and products dependent on DNA and amino acid sequences. They are also used for treating diseases such as Parkinson's disease, Alzheimer's cdisease and other neurodegenerative diseases, anaemia, platelet canded supplements, ulcers, osteoporosis, autoimune diseases or cancer. The nucleic acids may also be used as hybridisation probes or comparers, and in the recombinant production of a protein. The polypeptides care also useful in generating antibodies, as molecular weight markers, cand in the recombinant production of a protein. The polypeptides cand as food supplements. The present sequence represents a specifically claimed human cDNA sequence of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was considered in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1061 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to 971 novel human cDNA sequences (ADC29919-ADC30889) and the polypeptides they encode (ADC30890-ADC31860). The invention also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polynucleotide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet
                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                               545
                                                                                                                                                                                                                                               485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y, d
                                                                                                                                                                                                                                                                                                                                                                                                             300;
                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang J,
Ghosh M,
                         TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                            GGTCCCCGCTGACGGGGAGACTGGGGAGGTTAGGCCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                           GATTGACCT
                                                                                                                                                                                       GATTGACCTTCAACAGGAAAAAGAAAATGGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                           AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J, Ren F,
Wang D,
Drmanac R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          862; 1185pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         burns,
                                                                                                                                                                                                                                                                                                                                                                                                                            18.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         255 C;
                                                                                                                                                                                                                                                                                                                                                                                                       Score 300; DB; Pred. No. 1.7
                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xue AJ,
Ma Y, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       osteoporosis, autoimmune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Zhao QA,
Asundi V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261 T;
                                                                                                                                                                                                                                                                                                                                                                                                                            1.7e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang J,
Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wehrman T; Weng G;
                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                      562
                                                                             664
                                                                                                                    502
                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                           484
724
                                                                                                                                                           604
                                                                                                                                                                                                                                         544
```

```
RESULT 9
ABS67785
                                                                              Human receptors and membrane associated protein REMAP-7
                                                                                     ABS67785 standard;
```

gene

cardiovascular disorder; hypertension; congestive heart failure; oedema; aneurysm; angina pectoris; ischaemic heart disease; lung disease; nausea; rheumatic heart disease; chronic obstructive pulmonary disease; anaemia; emphysema; bronchitis; gastrointestinal disorder; peptic ulcer; asthma; Crohn's disease; lipid metabolism disorder; Fabry's disease; dementia; pancreatitis; diabetes mellitus; hyperlipidaemia; autoimmune disorder; pancreatitis; disorder; neurological disorder; Creutzfeldt-Jakob disease; cell proliferative disorder; protein replacement therapy; adenocarcinoma; developmental disorder; metabolic disorder; Alzheimer's disease; stroke; Parkinson's disease; multiple sclerosis; Cushing's syndrome; anxiety; schizophrenia; Addison's disease; endocrine disorder; gene therapy; gout; amnesia; cancer; leukaemia; lymphoma; myeloma; sarcoma; gene; ds. Human; receptor and membrane-associated protein; REMAP; atherosclerosis

WO200263006-A2

15-AUG-2002

05-FEB-2002; 2002WO-US003868

06-FEB-2001; 2001US-0267201P 16-FEB-2001; 2001US-0269580P; 09-APR-2001; 2001US-0286679P; 02-MAY-2001; 2001US-0288295P; 14-JAN-2002; 2002US-0348687P;

(INCY-) INCYTE GENOMICS INC.

Swarnakar A, Warren BA, Walia NK, Po Au-Young J, Baughn MR, Duggan BM, Lu Raumann BE, Lu Y, Sapperstein SK, Tru Emerling BM, Hafalia AJA, Burrill JD, Kable AE, Gorvard AE; Azimzai Y, Yu Thangavelu K, Swarnakar A, Yue ie H, Dir Elliott Ding L, Ĺ Nguyen DB, Gandhi AR, Burford N;
Y J, Yao MG, Lal PG, Tang TY;
Policky JL, Xu Y, Honchell CD;
Lu DAM, Gietzen KJ, Hillmann J
Tran UK, Richardson TW;
JD, Marcus GA, Zingler KA; Hillmann JL;

WPI; 2002-627559/67. P-PSDB; ABG92064.

New human receptor and membrane-associated proteins and polynucleotides, useful for diagnosing, treating or preventing cardiovascular disorders (e.g. aneurysms), neurological disorders (e.g. Parkinson's disease) or

ۍ ۲. Page 232-233; 262pp; English.

The present invention relates to a new receptor and membrane-associated protein (REMAP). The polypeptide, polynucleotide and agonist are useful for treating a condition associated with decreased expression of functional REMAP. The antagonist is useful for treating a disease associated with overexpression of functional REMAP. The anti-REMAP antibody is useful for diagnosing a condition or disease associated with the expression of REMAP. These polypeptides, polynucleotides, agonists and antagonists are particularly useful for diagnosing, treating or preventing cardiovascular (e.g. atherosclerosis, hypertension, aneurysms, congestive heart failure, angina pectoris, or ischaemic or rheumatic heart disease) lung (e.g. oedema, chronic obstructive pulmonary disease, emphysema or bronchitis) gastrointestinal (e.g. nausea, peptic ulcer or Crohn's disease), lipid metabolism (e.g. Fabry's disease, diabetes

Ś 밁 Ś B 8 밁 S 뮍 S

멂

```
RESULT 10
ABA05334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mellitus or hyperlipidaemia), autoimmune/inflammatory (e.g. anaemia, asthma, gout, pancreatitis or Crohn's disease), neurological (e.g. dementia, stroke, Alzheimer's disease, Creutzfeltt-Jakob disease, multiple sclerosis, Parkinson's disease, anxiety, schizophrenia or annesia), metabolic (e.g. Addison's disease), developmental (e.g. Cushing's syndrome), endocrine or cell proliferative disorders (e.g. cancers including adenocarcinoma, leukaemia, lymphoma, myeloma or sarcoma). The present nucleic acid sequence encodes a human REMAP protein
                                                                                                                                                                                                                                                                        Human; fucosyltransferase family member 32132; cytostatic; antitumour; antiatherosclerotic; hypotensive; antiarrhythmic; vasotropic; antiidiabetic; antiatrhritic; immunosuppressive; antithyroid; antiulcer; antiinflammatory; ophthalmological; antiallergic; antiasthmatic; nephrotrophic; dermatological; antidiarrheic; vulnerary; haemostatic; virucide; antibacterial; nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic; anorectic; metabolic; immunomodulator; prolifferation; differentiation; cancer; apoptosis; leukaemia; arthritis; cardiovascular disease; diabetes mellitus; ulcerative colitis; Crohn's disease; glomernlonephritis; hepatocellular necrosis;
28-APR-2000; 2000US-0200604P
                                                                    08-NOV-2001
                                                                                                       WO200183721-A2
                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human fucosyltransferase family member 32132 coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABA05334 standard; cDNA; 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1550 BP; 413 A; 344 C; 348 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the invention
                                 27-APR-2001; 2001WO-US013805
                                                                                                                                                                                                                                                               homeostasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263
                                                                                                                                                                                                                            sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                             meningitis; multiple sclerosis; pain; gene therapy; ss
                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                         product= "fucosyltransferase family member 32132"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 298;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               445 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.4e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1550;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
```

밁

560

GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTG

TTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT

490

430 619 370

TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACA 799 TCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC TCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCACGGCCCGGGCATCCGCC GCTATTCCCCCACTTCCCCGGGAGACTCGGAGCGCA-TCGAGTGTGCGCGCGCGCGCGTGCG GGTGGTCCCCGCTGACGGGGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT 499

TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG

S 밁

Query Match Best Local S Matches

Local

Similarity

10.8%;

Score 180.8; DB 6; Pred. No. 2.4e-39;

489;

Conservative

0;

Mismatches

442;

Indels 13; Length 1479

Gaps

Sequence 1479 BP; 280 A; 453

C; 459 G; 287

T; 0 U; 0 Other;

밁 Ś B Ś

```
commember of the fucosyltransferase family comprising: (a) nucleotide comprising 80% identity to sequence $1 (ABA05333) or $3 (ABA05334); (c) comprising fragment of $1 or $3; (c) encoding a polypeptide (II) comprising a fully defined sequence $2 (AAM47905) of 492 amino acids or its fragment; or (d) encoding naturally occurring allelic variant of $2. (I) has cytostatic, antitumour, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, comprising a fully defined sequence $2 (AAM47905) of 492 amino acids or its fragment; or (d) encoding naturally occurring allelic variant of $2. (I) has cytostatic, antitumour, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, compressive, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, compressive, antiatherosclerotic, nephrotrophic, compressive, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, antiatherosclerotic, hypotensive, antiatherosclerotic, compressive, antiatherosclerotic, nephrotrophic, compressive, antiatherosclerotic, n
Novel isolated 32132 nucleic acid encoding 32132 polypeptide, a novel member of fucosyltransferase family, useful for treating atherosclerosis, multiple sclerosis, acute glomerulonephritis, Raynaud's disease, pain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 105-106; 125pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MILL-) MILLENNIUM PHARM INC
```

```
RESULT 11
ABA05333
ID ABA05333
AC ABA05
XX ABA05
XX Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                       Human; fucosyltransferase family member 32132; cytostatic; antitumour; antiatherosclerotic; hypotensive; antiarrhythmic; vasotropic; antidiabetic; antiarrhritic; immunosuppressive; antitityroid; antiulcer antiinflammatory; ophthalmological; antiallergic; antiasthmatic; nephrotrophic; dermatological; antidiarrheic; vulnerary; haemostatic; virucide; antibacterial; nootrophic; neuroprotective; antiparkinsonian;
                                                                                                                                                                   anticonvulsant; analgesic; anorectic; metabolic; immunomodulator; prolifferation; differentiation; cancer; apoptosis; leukaemia; arcardiovascular disease; diabetes mellitus; ulcerative colitis; crohn's disease; glomerulonephritis; hepatocellular necrosis; homeostasis; meningitis; multiple sclerosis; pain; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                           Human fucosyltransferase family member 32132 encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABA05333 standard; cDNA; 2557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGTITGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCATCTGTAACGACTACATGACAGAAAAAACTGTGGCGTCCCATGCACCTGGGCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GÓCGCCGCCGCCACGCCGCCGCCGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAACAATCACTCCGTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGATCCAGAGCTCTTGGCTTCTTGTCCCGCTATAAGTTCCACTTGGCCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTGCAGAATCGGGAGCTGCCTACCGCGCGCCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                          /*tag= a
/product=
                                                              Location/Qualifiers 236. .1714
                        "fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----CAGCAGCTGAAAAATCCAGCCTCTATGG
                          family member 32132"
                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1374
                                                                                                                                                                                                                                                                                                                                        id; antiulcer;
                                                                                                                                                                                                                                      arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              607
                                                                                                  Ş
                                                              밁
                                                                                                                                                 8
                                                                                                                                                                                Ś
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 489
                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Meyers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200183721-A2
                        620
                                                                                                                                                                                           500
                                                                                                                                                                                                                                   487
                                                                                                                                                                                                                                                                                                                  al Similarity
489; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MILLENNIUM PHARM INC
TTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT
                                                                                                                                                                                                                                                                                                                                                                                                      2557
                                                                GCACAGACTTCCGCGCGCGCGCCCCGCTGCCGCGCGCGCACCAGAGCTGGGCGC
                                                                                                      GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTG
                                                                                                                                                                                                                                                                         GGTGGTCCCCGCTGACGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT
                                                                                                                                                 TCTTCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTCTATG
                                                                                                                                                                                                                                 GCTATTCCCCCACTTCCCGGGGAGACTCGGAGCGCA-TCGAGTGTGCGCGCGCGCGCGCGCGCG
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0200604P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US013805
                                                                                                                                                                                                                                                                                                                                                                                                      BP;
                                                                                                                                                                                                                                                                                                                                      10.8%;
                                                                                                                                                                                                                                                                                                                    °.
```

```
CC its fragment; or (d) encoding naturally occurring allelic variant of the cytostatic, antitumour, antiatherosclerotic, hypotensive, (c) inmunosuppressive, antitumour, antiatherosclerotic, hypotensive, antiarrhythmic, vasotropic, antidiabetic, antiarrhythic, communosuppressive, antithyroid, antidiathmatic, nephrotrophic, comphthalmological, antidiarrheic, vulnerary, haemostatic, virucide, comphthalmological, antidiarrheic, vulnerary, haemostatic, virucide, comphthalmological, antidiarrheic, vulnerary, haemostatic, virucide, communosuppressive, analgesic, anorectic, metabolic and immunomodulator cartivity. (I) and (II) are useful for treating proliferative and/or differentiative disorders of the colon, including proliferative and/or differentiative disorders, including prodular hyperplasia and adenomas, complete the colon, including proliferative and/or circluding bronchogenic carcinoma and neuroendocrine tumour. The concluding bronchogenic carcinoma and neuroendocrine tumour. The concluding bronchogenic carcinoma and neuroendocrine tumour. The considers such as acute promyeloid leukaemia, acute myelogenous carcinoma and neuroendocrine tumour. The considers such as acute promyeloid leukaemia, acute myelogenous carcinoma and neuroendocrine tumour. The considers of blood vessels, immunological disorders such as catte promyeloid respective colitis, Crohn's disease, colon disorders e.g., polycystic kidney disease, acute associated with accumulation of fibrous tissue, hepatocallular necrosis or injury induced by agents including processes which disturb haemorrhage, bacterial or viral meningitis, neurodegenerative disorder, glidma, complete sclerosis, metabolic or pain disorders. (I) can be used in gene consisted as caterosis, metabolic or pain disorders. (I) can be used in gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to an isolated 32132 nucleic acid (I), encoding a member of the fucosyltransferase family comprising: (a) nucleotide sequence having 80% identity to sequence (I) (ABA05333) or S3 (ABA05334); (b) comprising fragment of S1 or S3; (c) encoding a polypeptide (II) comprising a fully defined sequence S2 (AAM47905) of 492 amino acids or its fragment; or (d) encoding naturally occurring allelic variant of S2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel isolated 32132 nucleic acid encoding 32132 polypeptide, a member of fucosyltransferase family, useful for treating atheros, multiple sclerosis, acute glomerulonephritis, Raynaud's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 105-107; 125pp; English.
                                                                                                                                                                                           540 A; 690 C;
Score 180.8; DB
Pred. No. 3e-39;
Nismatches 44
                                                                                                                                                                                           684 G;
                                                                                                                                                                                                     641
                                                                                                                                                                                           T;
                                                                                                                                                                                                0
                                                                                        6
                                                                                                                                                                                                <u>ب</u>
                                                                                        Length
                                                                                                                                                                                                2 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atherosclerosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pain.
```

442;

Indels

13;

Gaps

499

```
ABLO7657
ID ABLO7
XX ABLO7
AC ABLO7
AC ABLO7
XX 26-MA
CF Droso
XX ACC
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
23-MAR-2000; 2000US-0191637P
                                     23-MAR-2001;
                                                                                                                  WO200171042-A2
                                                                                                                                                         Drosophila melanogaster.
                                                                                                                                                                                            pharmaceutical; gene; ss
                                                                                                                                                                                                               Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                    Drosophila melanogaster expressed polynucleotide SEQ ID NO 17453
                                                                                                                                                                                                                                                                                                26-MAR-2002
                                                                                                                                                                                                                                                                                                                                     ABL07657;
                                                                                                                                                                                                                                                                                                                                                                           ABL07657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           666
                                                                                                                                                                                                                                                                                                                                                                           standard; cDNA; 1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC 1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTACGAAACAAAGACCTCCCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGCCGCCGGCTACGCGCCGCCGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACA 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCACGGCCCCGGGCATCCGCC 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT 1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAACAATCACTCCGTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCCGGGACCGCCTATCT---GCGCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGT
                                       2001WO-US009231.
                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                             BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGCTGAAAAATCCAGCCTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                   밁
                                                                          Ş
                                                                                                                  밁
                                                                                                                                             $
                                                                                                                                                                                            밁
                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Sim
Matches 427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1431 BP; 390 A; 341 C; 342 G; 358 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated nucleic a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-656860/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JUL-2000; 2000US-00614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        interactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (PEKE ) PE CORP NY
    1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           476
                                                                                                                                                                                                                                      893
                                                                                                                                                                                                                                                                           626
                                                                                                                                                                                                                                                                                                                   833
                                                                                                                                                                                                                                                                                                                                                      566
                                                                                                                                                                                                                                                                                                                                                                                                                                     506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    596
                                                                                                                                                                                                                                                                                                                                                                                             776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABB63554.
CACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTC 1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acid
a and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , DWD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Myers
```

```
Claim 1; SEQ ID NO 17453; 21pp + Sequence Listing; English
                                                                                                        detection reagent for detecting 1000 or more for elucidating cell signaling and cell-cell
                                                                                                                                                                                                                                                                                                                                 臣
```

The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511) expressed DNA sequences (ABL16175) and the encoded proteins (ABB57377-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences 25

Length 1431;

GGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGC GGGCCCGGGGCGTCCTGTTTTACGGCTCAAACATAAAGACGGGAGACTTTCCCCTGCCTC ATETTACETTTGACEGCAAGTCAAAGTACEGATACCGTCCATCCACATCGGTGGTGTTCC TAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAG---ACTTGCTCCGCTGGTGTATG TCATGATTGCCATTGAGAACGCTGCCTGTCCGGATTATATTACCGAAAAGTTTTTGGCGTC AAAATCCAGCCTCTA---TGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGT TCCAAAGCGACTGCGACACGATGTCTGGAAGGGAGGACTACGTAAAGGAACTGATGAAAC TACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTT ACTTGCCGCTGACTACGATGTACTTGCCCAGTGGCGAGGCGCTTACTTCGAAGGATTACT ACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACC TGTCCAATAAAGAGTTCCTTCGCCACTTCCATTTCACATCCACGTTTAGCCGCTACAGCA TCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCC GGAACGAGCACCAAATCTGGGCCCTACTGCATGAAGAATCACCAAGGAACACCCCTTTTG GCCAGTGCGGAATTCATACTTGCCGCATCACCAACAAGCGGA-----GCCGCCGTCCGT TTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGC AGGATTACTTGAATAATTTATATTCACCGGAGTTGCTGCGTTTCCTGTCCGAATACAAGT ATCTTCCGATCGATTCCTACGGCAGCTGCCTACGGAATAGAGATCTGCCAGAGAGGCAAA Score 179.8; DB 4; Pred. No. 4.4e-39; 0; Mismatches 342; indels 12; Gaps 9 8 8 8 1069 805 1009 952 685 892 625 565 775 715 445 655 385 595 325 535 745 505

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; cardiant; hypotensive; hypertensive; cytostatic; antiinflammatory; antiasthmatic; osceopathic; antiihyroid; gynecological; antibacterial; fungicide; virucide; antiparastitic; protozoacide; antiparastitic; protozoacide; antipsoriatic; antiarthritic; immunosuppressive; antirheumatic; antipsoriatic; antiandiani; nembrotropic; neuroleptic; antigout; antiarrhythmic; antiparkinsonian; tranquiliser; anorectic; antiucer; hepatotropic; antiparkinsonian; tranquiliser; anorectic; antiucer; hepatotropic; antiparkinsonian; tranquiliser; anorectic; antiucer; hepatotropic; cardiovascular disorder; respiratory disorder; blood disorder; cardiovascular disorder; respiratory disorder; infection; arthritis; asthma; autoimmune disease; immune disorder; cardiovascular disorder; disease; jout; osteoporosis; renal disorder; Alzheimer's disease; parkinson's disease; schizophrenia; attention deficit disorder; obsessive compulsive disorder; wound healing;
The present invention relates to novel human secreted proteins (ABR54278-ABR54331) and their coding sequences (ACC62475-ACC62528). The proteins and their coding sequences are useful for treating, preventing, diagnosing and/or prognosing neoplastic diseases, blood disorders, cardiovascular disorders (e.g. cardiomyopathy, hypertension, hypotension), respiratory disorders (e.g. lung cancer, pneumonia,
                                                                                                                                                                                                                                                              Ruben
Ni J,
                                                                                                                                               Novel human secreted polypeptides and polynucleotides for diagnosing and treating neural, immune system, muscular, reproductive, gastrointestinal cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                  P-PSDB;
                                                                                                                                                                                                                                                                                                                                            06-JUN-2001;
11-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                            05-JUN-2002; 2002WO-US017699
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200299066-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACC62479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1130
                                                                                                                                                                                                                  2003-140609/13.
)B; ABR54282.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             926
                                                                                                                                                                                                                                                                SM, B
                                                                                                                                                                                                                                                                                                               HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTTGATAATGGGAGTTATTCCAATTTACTTTGGCTCACCCATAAAAGACTGGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCTCAATAAGTTGGCGGATAACAAAAAGCTGTACAATTCGTACCGCCAACACAAACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAATAATAAATCTGCAATTTTTGTGAACGACTTTCAAAATCCTCAGGCATTGGTAGAGT
                                                                                                                                                                                                                                                                             Bell A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1250
                                                                                                                                                                                                                                                                                                                                            2001US-0295869P
2001US-0304121P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein #5 coding sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry
                                                                                                                                                                                                                                                                                 Birse CE,
                                                                                                                  605pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  βP
                                                                                                                                                                                                                                                                                 Komatsoulis
                                                                                                                                                                                                                                                                               ر<sub>ه</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ü
                                                                                                                                                                                                                                                                                 Choi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            925
      밁
                             δ
                                                                    В
                                                                                          Ś
                                                                                                                                 밁
                                                                                                                                                           S
                                                                                                                                                                                          8
                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8888888888888888888888888
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 410; Conserv
                                                                                                                                                                   1194
                                                                                                                                                                                                                               1134
                                                                                                                                                                                                                                                                                                1074
                                                                                                                                                                                                                                                                                                                                                              1014
                                                                    815
                                                                                                                                                                                                  695
                                                                                                                                                                                                                                                                                                                               575
                                                                                                                                                                                                                                                                                                                                                                                            515
                                                                                                                                                                                                                                                                                                                                                                                                                             954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           395
        TCCTTTGCTGCCTAACTACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGC
                              CGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGC
                                                                    GGGCATCACCAACCAATTTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGA
                                                                                          TGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGA
                                                                                                                                                                  CAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGG 125
                                                                                                                                                                                                  CAATCACTCCGTCATCCTGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTAT
                                                                                                                                                                                                                                 TAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACAT
                                                                                                                                                                                                                                                                GCACCTGGGCGCTGTGCCCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAA
                                                                                                                                                                                                                                                                                              GAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAG
                                                                                                                                                                                                                                                                                                                               CTTGGCCCTGGAAAATGCCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCAT
                                                                                                                                                                                                                                                                                                                                                              CCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACT
                                                                                                                                                                                                                                                                                                                                                                                              AGCCACGGCCACCGAGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                             AAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT-----CAGCAGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTECGACGTGCCAGCGGACCGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGAACGCGCGGAGTGGCGCCGCCGCCGCTACGCGCCGCTGCTCTATCTGCAGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGTCGCTGCAGTGGCTGCCCGGGACCGCCTATCTGCGC---CGCCCGGTGCCTCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCGGGCATCCGCCTCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCTCGGCGCTGGGGCGCTCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 162.6; DB 7
Pred. No. 2.9e-34;
0; Mismatches 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   359;
```

814

874

1373

934

1193

754

1133

634

694

1073

1013

514 953 454 902

842

334 782 277 217

394

574

CC bronchiolitis, asthma), endocrine disorders (e.g. Addison's disease, CC Cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, CC thyroiditis), reproductive system disorders (e.g. premenstrual syndrome, CC polycystic ovary syndrome), infectious diseases caused by bacteria, CC fungal, viral, parasitic, protozoal, and/or blood-related disorders and CC finegal, parasitic, protozoal, and/or blood-related disorders and CC diseases, rheumatoid arthritis, immune deficiency, psoriasis, CC diseases, protocomenstrual syndromene CC diseases, gout, osteoporosis, allergiae, and bone cancers, Paget's CC disease, gout, osteoporosis, arrhythmia, anglina, prostate cancer, renal CC disorders, urolithiasis, Alzheimer's disease, Parkinson's disease, concernia, and concernia, attention deficit disorder, obsessive compulsive concernia, obesity, goiter, ulcerative colitis, hepatitis. They are also CC useful for stimulating epithelial cell proliferation and basal CC keratinocytes for wound healing, and to stimulate hair follicle production and healing of dermal wounds

Sequence 1804 BP; 405 A; 474 C; 457 G; 465 T; 0 U; 3 Other; Length 1804; Indels 12; Gaps

н 1374

```
RESULT 14
ACC62499
        The present invention relates to novel human secreted proteins (ABR54278-CC ABR5431) and their coding sequences (ACC62475-ACC6528). The proteins CC and their coding sequences are useful for treating, preventing, CC diagnosing and/or prognosing neoplastic diseases, blood disorders, CC cardiovascular disorders (e.g. cardiomyopathy, hypertension), respiratory disorders (e.g. lung cancer, pneumonia, CC hypotension), respiratory disorders (e.g. lung cancer, pneumonia, CC cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, CC cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, CC cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, CC cytrioiditis), reproductive system disorders (e.g. premenstrual syndrome, CC polycystic ovary syndrome), infectious diseases caused by bacteria, CC fungal, viral, parasitic, protozoal, and/or blood-related disorders and confections, leukopaenia, leukaemias, arthritis, asthma, autoimmune CC diseases, rheumatoid arthritis, immune deficiency, psoriasis, cc diseases, rheumatoid arthritis, arthritis, asthma, autointered cancer, renal CC diseases, urolithiasis, Alzheimer's disease, Parkinson's disease, renal CC diseases, urolithiasis, Alzheimer's disease, Parkinson's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; cardiant; hypotensive; hypertensive; cytostatic; antiinflammato antiasthmatic; osteopathic; antithyroid; gynecological; antibacterial; fungicide; virucide; antiparastic; protozoacide; antianaemic; antiarthritic; immunosuppressive; antirheumatic; antipsoriatic; haemostatic; antidiabetic; antiallergic; antigout; antiarrhythmic; haemostatic; antidiabetic; antiallergic; antigout; antiarrhythmic;
                                                                                                                                                                                                                                                                                                                                                                                                   Novel human secreted polypeptides and polynucleotides for diagnosing and treating neural, immune system, muscular, reproductive, gastrointestinal, cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                endocrine disorder; reproductive system disorder; infection; arthritis; asthma; autoimmune disease; immune deficiency; psoriasis; diabetes mellitus; allergy; Paget's disease; gout; osteoporosis; renal disorder; Alzheimer's disease; Parkinson's disease; schizophrenia; attention deficit disorder; obsessive compulsive disorder; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antianginal; nephrotropic; neuroleptic; neuroprotective; nootropic; antiplex; hepatotropic; antiplex; hepatotropic; dermatological; gene therapy; neoplastic disease; blood disorder; cardiovascular disorder; respiratory disorder; cancer;
                                                                                                                                                                                                                                                                                                                                                                  Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-JUN-2001; 2001US-0295869P.
11-JUL-2001; 2001US-0304121P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200299066-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACC62499;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACC62499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2003-140609/13.
)B; ABR54302.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baker
                                                                                                                                                                                                                                                                                                                                                                Page 551; 605pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard; cDNA; 1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bell A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002WO-US017699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein #25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Birse CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coding sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Komatsoulis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Choi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Olsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ή,
```

```
RESULT 15
ACC62500
ID ACC62
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ន្តន្តន្តន្ត្
                                                                                                                    Ś
                                                                                                                                                          밁
                                                                                                                                                                                 Ś
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                  멼
                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            schizophrenia, attention deficit disorder, obsessive compulsive pneumonia, obesity, goiter, ulcerative colitis, hepatitis. They useful for stimulating epithelial cell proliferation and basal keratinocytes for wound healing, and to stimulate hair follicle production and healing of dermal wounds
                  ACC62500 standard; cDNA; 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1812 BP;
                                                                                                                           1374
                                                                                                                                                                                                                                                                                                                1194
                                                                                                                                                                                                                                                                                                                                                                           1134
                                                                                                                                                                                                                                                                                                                                                                                                                                         1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1014
                                                                                                                                                                                      1314
                                                                                                                                                                                                                                                                                                                                                                                                          653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               473
                                                                                                                                                          893
                                                                                                                                                                                                                                                                                  773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 52.1
[0; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCA
                                                                                                                                                                                                                                                                                                            CAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGG
                                                                                                                                                                                                                                                                                                                                                                           TAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGAACGCGCGGAGTGGCGCCGCCGCCGCTACGCGCCGCTGCTCTATCTGCAGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               actaactacccaatactiggagagcattgaagtcctgaagtcactccgatacctagttcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAPACCAGEGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCCACTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTCGGCGCTGGGCGCTCCTCCACGAGGAGTCGCCCCCCAACAACTTCTTGCTGAGCCA
                                                                                                                                                                               CGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGC
                                                                                                                                                                                                                     GGGCATCACCAACTATTTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGA
                                                                                                                                                                                                                                                   TGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGA
                                                                                                                                                                                                                                                                                TGACTTTĊTĠĠĀCAAGAĀTĠĀTGAGGĀĠŤĀŤATĠAAATĀCCTĠĠCĀŤĀCĀĀĠĊAACCTĠĠ
                                                                                                                                                                                                                                                                                                                                             CAATCACTCCGTCATCCTGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                          GCACCTGGGCGCTGTGCCCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTGGCCCTGGAAAATGCCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT-----CAGCAGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GÉTIGTÉGETGÉAGTGGETĞCCCGGGACCGCCTATETGCGC----CGCCCGGTGCCTCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCCGGGCATCCGCCTCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCC
                                                                                                                                                        TCCTTTGCTGCCTAACTACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCACGGCCACCACCGAGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMATCCAGCCTCTATGGATGCCGATGGCTTTATAGGATCATTGCACAGTATAAGTTTAT
                                                                                                                           1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     431 A; 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 162.6; I
Pred. No. 2.9e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; 461 G; 440 T; 0
                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ,9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        412
                                                                                                                                                                                                                                                    1313
                                                                                                                                                                                                                                                                                                                                                                                                                                         1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        842
                                                                                                                                                                                         1373
                                                                                                                                                                                                                       892
                                                                                                                                                                                                                                                                                    832
                                                                                                                                                                                                                                                                                                                 1253
                                                                                                                                                                                                                                                                                                                                                772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235
                                                                                                                                                             952
```

23-JUN-2003 ACC62500;

(first entry)

```
The present invention relates to novel human secreted proteins (ABR54278-ABR54331) and their coding sequences (ACC62475-ACC62528). The proteins and their coding sequences are useful for treating, preventing, and their coding sequences are useful for treating, preventing, cardiovascular disorders (e.g. cardiowypathy, hypertension), respiratory disorders (e.g. lung cancer, pneumonia, hypotension), respiratory disorders (e.g. lung cancer, pneumonia, bronchiolitis, asthma), endocrine disorders (e.g. Addison's disease, Cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, thyroiditis), reproductive system disorders (e.g. premenstrual syndrome, polycyscic overy syndrome), infectious diseases caused by bacteria, fungal, viral, parasitic, protozoal, and/or blood-related disorders and infections, leukopaenia, leukaemias, arthrittis, asthma, autoimmune diseases, rheumatoid arthritts, immune deficiency, psoriasis, paget's haemophilia, diabetes mellitus, allergies, and bone cancers, Paget's disease.
                                   disease, gout, osteoporosis, arrhythmia, angina, prostate cancer, renal disorders, urolithiasis, Alzheimer's disease, Parkinson's disease, schizophrenia, attention deficit disorder, obsessive compulsive pneumonia, obesity, goiter, ulcerative colitis, hepatitis. They are also useful for stimulating epithelial cell proliferation and basal keratinocytes for wound healing, and to stimulate hair follicle production and healing of dermal wounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human secreted polypeptides and polynucleotides for diagnosing and treating neural, immune system, muscular, reproductive, gastrointestinal, cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                haemostatic; antidiabetic; antiallergic; antigout; antiarrhythmic; antianginal; nephrotropic; neuroleptic; neuroprotective; nootropic; antianginal; tranquiller; anorectic; antiulcer; hepatotropic; antiparkinsonian; tranquiller; anorectic; antiulcer; hepatotropic; dermatological; gene therapy; neoplastic disease; blood disorder; cardiovascular disorder; respiratory disorder; cancer; endocrine disorder; reproductive system disorder; infection; arthritis;
Sequence 1804 BP; 405 A; 473 C; 456 G; 465 T; 0 U; 5 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 551-552; 605pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-140609/13.
P-PSDB; ABR54303.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUN-2001; 2001US-0295869P.
11-JUL-2001; 2001US-0304121P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200299066-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      asthma; autoimmune disease; immune deficiency; psoriasis; diabetes mellitus; allergy; Paget's disease; gout; osteoporosis; renal disorder; Alzheimer's disease; Parkinson's disease; schizophrenia; attention deficit disorder; obsessive compulsive disorder; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; cardiant; hypotensive; hypertensive; cytostatic; antiinflammatory; antiasthmatic; osteopathic; antithyroid; gynecological; antibacterial; fungicide; virucide; antiparasitic; protozoacide; antianaemic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human secreted protein #26 coding sequence SEQ ID 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUN-2002; 2002WO-US017699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiarthritic; immunosuppressive; antirheumatic; antipsoriatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SM, Bell A,
Baker KP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Birse CE, Komatsoulis G, Choi GH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Olsen H;
                                                                                                                        also
```

ż	OV V	рь	Ş	Db	γQ	Дb	88	Db	82	ф	Ş	дь	γQ	Ф	Ş	Db	Qy	망	Qy	В	Ş	Дb	V.	DЬ	Ş	ф	VQ	Matches
_		875 TCCTTTGCTGCCTAACTACCTYAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGC 934	1314 CGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGC 1373	815 GGGCATCACCAACCAATTTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGA 874	1254 TGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACTGGGAAATGGGGAGTGCAAGA 1313	755 TGACTTTCTGGACAAGAATGATGAGGAGTATATGAAATACCTGGCATACAAGCAACCTGG 814	1194 CAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGGTGAAGGG 1253	695 CAATCACTCCGTCATCCTGATTGATGTTTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTAT 754	TAACAAAAGTGCTATTCTTGTATCAGAAFTTTCTCACCCCAGGGAACTGGCAAGTTACAT	635 de accidade de Tradece de Tra	1074 GAAACTGGGGGTAGTCCCTGTATTTACGGATCCCCCAGCATCACAGACTGGCTTCCCAAG 1133	575 CTTGGCCCTGGAAAATGCCATCTGTNACGACTACATGACAGAAAAACTGTGGCGTCCCAT 634	1014 CCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACT 1073	515 AGCCACGACCACCAGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCA 574	954 AAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTAT 1013	455 AGACTCCTACGGGAAATGCCTGCAGAATCGGGAGCTGCCTACCGCGCGCTACAGGACAC 514	903 CGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAA 953	395 CTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGT 454	843 CTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGT 902	335 CATGGAACGCGCGGAGTGGCGCCGCCGCCGCCGCTACGCGCTGCTCTATCTGCAGTCACA 394	783 TITGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCGCTGGTGTATGTA	278 GCTGTCGCTGCAGTGGCTGCCCGGGACCGCCTATCTGCGCCGCCCGGTGCCTCCGCC 334	723 ACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCC 782	218 CGGCCCGGCCATCCGCCTCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCC 277	663 TAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCCACTTGCC 722	158 ccricegogeregecercerceachachacrececerchachachacricerechacca 217	603 CCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCA 662	nes 409; Conservative 1; Mismatches 359; Indels 12; Gaps 2;

Search completed: September 12, 2004, 22:22:31 Job time: 477.373 secs

935 T 935

Query Match Best Local Similarity

9.7%;

Score 162.2; DB 7; Pred. No. 3.7e-34;

Length 1804;

Copyright

RESULT 2 US-09-621-976-1888 ; Sequence 1888, Application ; Patent No. 6639063 ; GENERAL INFORMATION:

US/09621976

g &	\$ &	d dd	dy Vy	dy Vy	Query Best L Matche	RESULT US-09-1 Seque Feates GENES GENES HERE FILL CURE CURE CURE CURE SOFF SEQ LES TYU US-09-1		22000000000000000000000000000000000000
1621 TGAT 311 TGAT	1561 CTG 251 CTG	1501 CGJ 191 CGJ	1441 TG(131 TG(1381 AGG 71 AGG	y Match Local Simi nes 264;	RESULT 1 US-09-621-976-12473 ; Sequence 12473, Application US/0 ; Patent NO. 6639063 ; GENERAL INFORMATION: APPLICANT: Dumas Milne Edwards, APPLICANT: Jobert, S. APPLICANT: Jobert, S. APPLICANT: Glordano, J.Y. TITLE OF INVENTION: ESTS and ET FILE REFERENCE: GENSET. 054PR2 ; CURRENT APPLICATION UMBER: US- ; CURRENT FILING DATE: 2000-07-2 ; MUMBER OF SEQ ID NOS: 19335 ; SOFTWARE: Patent.pm ; SEQ ID NO 12473 ; LENGTH: 450 ; TYPE: DNA ; ORGANISM: Homo sapiens US-09-621-976-12473		37.2 37.2 37.2 37.2 37.2 37.2 37.2 37.2
3-3	GGTTGATAGGA GGTTGATAGGA	CGAGAGATGTG CGAGAGATGTG	TGCCCAGAGCCCACA	AGGCTTCAGGAAAAGGGCT' AGGCAAGGAAATAGGGGCT'	ilarity Conserva	APPlica 3063 ATION: APPlica nas Milne bert, S. iordano, S. SEGENSTION: ESS: GENSTION TION: BOATION JATION J		
ATGATCA	GAATCAA GAATCAA	GATTTO	CACAGTGT	AAAGGG	15.4% 96.0% tive	e Edward J.Y. J.Y. TIS and J.M.BER; 11. 2000-0.		00000000000000000000000000000000000000
TCAAAAATGATCAGAATGAAACAGAAAAAA 1655 CAAAAATGATCAGAATGAAACAGACTAGA 345	aactittcatctcaagagitti aactittcatctcaagagitti	CAGCTTTGAACAATCCAAGAAAGAAGCC 	GTTTGCTTTCTCACCACTCCGGACTC	TACCACCCAAAAGATGGGAGGC	; Score 257.4; DB 4; ; Pred. No. 2.3e-72; 0; Mismatches 11;	S/09621976 ds, J.B. Encoded Human Proteins. US/09/621,976 7-21	ALIGNMENTS	US-08-836-261A-1 US-09-621-976-11009 US-09-621-976-16038 US-08-924-747-25 US-09-247-373B-25 US-09-267-715-25 US-09-621-976-16013 US-09-621-976-16044 US-09-621-976-16014 US-09-621-976-16013 US-09-621-976-16014 US-09-621-976-16015 US-09-621-976-16015 US-09-621-976-16016 US-09-621-976-16018 US-09-621-976-16018 US-09-621-976-16018 US-09-621-976-16019 US-09-621-976-16019 US-09-621-976-16019
	GGGGCCTAGTATTCAAGGAC 1620	AGCCCAGGCACTAAGGTGG 1560	TCCACCTTTGAGCTCTTTG 1500	AGAAGATACCCACCTGAGT 1440	Length 450; Indels 0; Gaps 0;			Sequence 1, Appli Sequence 11009, A Sequence 25, Appl Sequence 25, Appl Sequence 25, Appl Sequence 26, Appl Sequence 16012, A Sequence 16012, A Sequence 16032, A Sequence 16032, A Sequence 16034, A Sequence 16014, A Sequence 16016, A Sequence 16018, A Sequence 16019, A Sequence 16019, A Sequence 16019, A

```
US-08-232-463-14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-621-976-1888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 1888
LENGTH: 455
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/07/935,313

FILING DATE:

APPLICATION NUMBER: EP 91 114 300.6

FILING DATE: 26-AUG-1991

ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 30472/114 IMMU

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703)836-9300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTS and Encoded Human
FILE REFERENCE: GENSET. 0549R2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: CDS
LOCATION: 144.428
LOCATION: 144.233
OTHER INFORMATION: Von Heijne matrix
OTHER INFORMATION: score 4.0999990463257
OTHER INFORMATION: seq LVPAGMAVQEIGA/QM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dumas Milne Edwards,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                       ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC comparible
COMPUTER: IBM PC comparible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: FALKNER, F. G.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER,
APPLICANT: FALKNER, F.
APPLICANT: FALKNER, F.
APPLICANT: FALKNER, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                   CLASSIFICATION: 435
                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   394 TTTCTGCTTGTCACACTCCAGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4, Application
5670367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITITITITITITITITITIGCCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3: Foley & Lardner
1800 Diagonal Road,
                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08232463
                                                                                                                                                                                                                                                      US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Encoded Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 44.4; DB 4;
Pred. No. 0.00064;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite 500
                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

8 8 8

13

1118 CAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGG 1177

AKCWTKWKWSWSYWMYWKWYYMKTYWRWRRKKKKAWWKYWKTWTWWYWRYAMWGTYKKKA

72

1058 AGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCA 1117

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-232-463-14
                                                        US-09-621-976-2813
                                                                                                                                                                                                                                                                                                                                         US-09-621-976-2813
Query Match
Best Local S
Matches 36
                                                                                                                       TITLE OF INVENTION: ESTs and Encoded Human Proteins.
FILE REFERENCE: GENSET. 054PR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILLING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
SEQ ID NO 2813
LENGTH: 832
TYPE: DNA
                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                Sequence 2813, Application US/09621976 Patent No. 6639063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
                                                                                                                                                                                                                                                     APPLICANT: Dumas Milne Edwards, J.B. APPLICANT: Jobert, S. APPLICANT: Giordano, J.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: 899149
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                   FEATURE:
NAME/KEY: CDS
LOCATION: 235..399
                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
Local Similarity
les 36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 7218 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1008 AACGAA 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361 AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAAGAAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 TITAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 2.6%; Score 44; DB 1; Le
Similarity 9.5%; Pred. No. 0.0063;
29; Conservative 151; Mismatches 126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAGCA 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.5%; Score 41.4; DB 4; ilarity 10.1%; Pred. No. 0.0091; Conservative 165; Mismatches 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
  156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 7218
                            Length 832;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
    Indels
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
  0,
```

```
RESULT 6
US-09-920-759-3
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
US-09-621-976-16015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뫉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens
US-09-621-976-16015
                                                                                                                                                   Sequence 3, Application US/09920759
Patent No. 6537811
GENERAL INFORMATION:
APPLICANT: Brenda F. Baker
APPLICANT: SUBAN M. Freier
TITLE OF INVENTION: ANTISENSE MODULATION OF SAP-1 EXPRESSION
FILE REFERENCE: RTS-0267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT FILING DATE: 2000-(
NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
SEQ ID NO 16015
LENGTH: 339
                                                              CURRENT APPLICATION NUMBER: US/09/920,759
CURRENT FILING DATE: 2001-08-01
NUMBER OF SEQ ID NOS: 91
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 16015, Application US/09621976 Patent No. 6639063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTS and Encoded Human
FILE REFERENCE: GENSET.054PR2
CURRENT APPLICATION NUMBER: US.09/621,976
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                                          ENGTH: 1933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1641 АТGАЛАСАGЛАЛАЛАЛАЛАЛАЛАЛАЛАЛА 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1581 CTTTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCAGA 1640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1521 CTTTGAACAATCCAAGAAAGAAGCCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAA 1580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1298 AATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGT 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1238 AATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178 CTGTGACCCAGCAAATAAAAATAGAAAATAATTCGATAGAAAAATAATAGAAATAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313 CWARMYRYSTGTRASMWWRRWYYTMMMKWWKYAWARAAWRWWAMWWAWRRACAAAAT 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           133 TTCYSSKGWTWWKRWKKAWTTWWWKKTYYWAATRYWWMCWTKRWRASWWYCWWWGKARK 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238 АЛАТТТАЛАЛАСАЛАССАЛБССТСАТТСТАТGЛАЛАЛАЛАЛАМWWAAAAAAAAAAAA 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YAGKSKISYKSNWMCWIRSWKYCYTKARWIGYYCYRKGGMWGKRGRWYASKKYMWKRWWW 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 алгалалалалалалалалалалалала 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGGCTTACCACCCAAAAAGAT 1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WSTWRKSRSYASARSAKRCCYSCSWGAMSWKYMWRMWRWRGWATGAGMKAWRASCMMRRK 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAG 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.4%; Score 40.6; DB 4;
53.0%; Pred. No. 0.0085;
ative 3; Mismatches 67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4; Length 339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
Patent No. 5877275

GENERAL INFORMATION:
APPLICANT: Arnaout, M. Amin
TITLE OF INVENTION: CONTROLLING (
TITLE OF INVENTION: RESPONSES WIT
NUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맔
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
US-09-690-942-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                   US-08-476-062A-52
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Oryza sativa
US-09-690-942-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-920-759-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 3
LENGTH: 844
TYPE: DNA
                                                                                                                                                                     Sequence 52,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 2.3%;
Best Local Similarity 52.5%;
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/09690942 Patent No. 6600089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 2.3%;
Best Local Similarity 71.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Weng, Zude
TITLE OF INVENTION: CAROTENOID BIOSYNTHESIS ENZYMES
FILE REFERENCE: BB1115 US NA1
CURRENT APPLICATION NUMBER: US/09/690,942
CURRENT FILING DATE: 2000-10-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: AN NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/083,042
PRIOR FILING DATE: APRIL 24, 1998
PRIOR APPLICATION NUMBER: PCT/US99/08746
PRIOR FILING DATE: APRIL 21, 1999
NUMBER OF SEQ ID NOS: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: CDS
LOCATION: (150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1907 AAAAAAAAAA 1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1628 АААААТGATCAGAATGAAACAGAAAAAAAAAAAAAAAAAAAAA 1669
                                                                                                                                                                                                                                                                                                                                                            1568 ATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGGCCTAGTATTCAAGGACTGATTTC 1627
                                                                                                                                                                                                                                                                                                                                                                                                                            1508 ГОТОВАТТТССАВСТТТВААСААТССВАВААВАВССССАВСЕЛСТВАВСТВЕСТВЕТТВ 1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1659 AAAAAAAAA 1669
                                                                                                                                                                                                                                                                                                                                                                                               175 TGTGTTTTGTTCAGCTTAACCGATCATTGAACCCATTGATGATGATGATGATGTTTATAT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51;
                                                                                                                                                                                                                                                        S
Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MICROSOFT OFFICE 97
                                                                                                                                                                                                                                                        (150) ... (1445)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kinney, Anthony
Vollmer, Steven
                                                                                                                                                                     Application US/08476062A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cahoon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rebecca E.
Anthony J.
, Steven J.
                                                                                 CONTROLLING CELLULAR IMMUNE/INFLAMMATORY RESPONSES WITH BETAZ INTEGRINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 38.8; DB 4;
Pred. No. 0.063;
0; Mismatches 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 39; DB 4; Length 1933; 
Pred. No. 0.098;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
US-09-023-655-1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-476-062A-52
                                                                                                                                                                                                                                                                                                                                                                     Sequence 1358, Application US/09023655
Patent No. 6607879
                                                                                                                                                                                                                          Patent NO. 000.100.

GAPPLICANT: Cocks, Benjamin G.

APPLICANT: Susan G. Stuart

APPLICANT: Jeffrey J. Selihamer

APPLICANT: Jeffrey J. Selihamer

APPLICANT: MYENTION: COMPOSITION FOR THE DETECTION OF BLOOD CELL GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION UNMBER: US/08/476,062A
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 09/216,081
FILING DATE: 21-MAR-1994
APPLICATION UNMBER: 07/637,830
FILING DATE: 04-JAN-1991
APPLICATION NUMBER: 07/539,842
FILING DATE: 18-JUN-1990
APPLICATION NUMBER: 07/21,573
FILING DATE: 28-JUN-1988
ATTORNEY/AGENT INFORMATION:
NAME: Freeman, John W.
REGISTRATION NUMBER: 29,066
REFIELDE / DOCKET NUMBER: 00786/068003
TELECOMMUNICATION INFORMATION:
TELEPAN: 617/542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 4704 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOTAL COLUMN STRANDEDNESS: SINGLE
                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELLETAX: 01.
                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDWELL TOPOLOGY: linear TVPE: DNA
                                                                                                                                                                             STREET:
                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1632 АТGATCAGAATGAAACAGAAAAAAAAAAAAAAAAAAAAA 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1572 GAATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAA 1631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4582 GCÁCAÁAAACGATGCÁTCTACCGCTCCTTGGGAAATÁATCTGAAAGGTCTAAAAATÁAÁA 4641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 2.3%;
1 Similarity 62.2%;
61; Conservative
                                                                                                         94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02110-2804
                                                                                                                                                             PALO ALTO
                                                                                                                                           CALIFORNIA
                                                                                                                                                                             E: INCYTE PHARMACEUTICALS, INC.
3174 PORTER DRIVE
                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 38.8; DB 2; Pred. No. 0.22; 0; Mismatches 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00786/068003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 4704;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
Ś
                                                          당
                                                                                     Ş
                                                                                                                                                                                     ; ORGANISM: Homo sapiens US-09-621-976-16983
                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
US-09-621-976-16983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LIBRARY: GENE; CLONE: 935175
US-09-023-655-1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
TELEPAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 1358:
                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
                                                                                                                                                                                                               TITLE OF INVENTION: ESTS and Encoded Human Proteins.

FILE REFERENCE: GENSET.054PR2

CURRENT APPLICATION NUMBER: US/09/621,976

CURRENT FILING DATE: 2000-07-21

NUMBER OF SEQ ID NOS: 19335

SOFTWARE: Patent.pm

SEQ ID NO 1983

LENGTH: 277

TYPE: DNA. USC. Conic.
                                                                                                                      Query Match
Best Local Similarity
Matches 56; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 16983, Application US/09621976 Patent No. 6639063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 2.3%;
Best Local Similarity 62.2%;
Matches 61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/023,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                          1584
                            1644 АЛАСАБЛАЛАЛАЛАЛАЛАЛАЛАЛА 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1572 GAATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAA 1631
                                                          167
227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid
AAAATAAAAAAAAAAAAAAAAAAAA 252
                                                            TTCATCTCAAGAGTTTTGGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCAGAATG 1643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCACAAAAACGATGCATCTACCGCTCCTTGGGAAATAATCTGAAAGGTCTAAAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENBANK
                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HEREWITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                   2.3%;
                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                      Score 38; DB 4;
Pred. No. 0.051;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PA-0001 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 38.8; DB Pred. No. 0.22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37;
                                                                                                                         30;
                                                                                                                                                      Length 277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 4704;
                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4641
                                                             226
                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-800-729-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
NAME/KEY: misc_feature
; LOCATION: 279, 281..282
; OTHER INFORMATION: n=a, g, c or t
US-09-621-976-16052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-621-976-16052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 6605592
GENERAL INFORMATION:
APPLICANT: Ni et al.
TITLE OF INVENTION: 32 Human secreted proteins
FILE REFERENCE: PZ044P1
                                                                                                                                                                                                                                                                       NUMBER SOFTWARE: SOFTWARE: 10 NO 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
SEQ ID NO 16052
 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 2.3%;
Best Local Similarity 51.7%;
                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/800,729
CURRENT FILING DATE: 2001-03-08
PRIOR APPLICATION NUMBER: PCT/US00/26013
PRIOR FILING DATE: 2000-09-22
PRIOR PILING DATE: 2000-09-22
PRIOR APPLICATION NUMBER: 60/155,709
PRIOR FILING DATE: 1999-09-24
NUMBER OF SEO ID NOS: 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: ESTs and Encoded Human Proteins.
FILE REFERENCE: GENEST.054PR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Jobert, S
APPLICANT: Giordano,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Dumas Milne Edwards, J.B
                                                       NAME/KEY: SITE
LOCATION: (6038)
OTHER INFORMATION: n
                                                                                                           NAME/KEY: SITE
LOCATION: (6037)
OTHER INFORMATION: n
                                                                                                                                                                     NAME/KEY: SITE
LOCATION: (6035)
OTHER INFORMATION: n
                                                                                                                                                                                                                             ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 329
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1641 ATGAAACAGAAAAAAAAAAAAAAAAAA 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1581 CTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCAGA 1640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1521 СТТТGААСААТССААGААGAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAA 1580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178 CTGTGACCCAGCAAATAAAATAGAAAATAATTCGATAGAAAATAATAGAAATAGAAA 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16052, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09800729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jobert, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09621976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J.Y.
                                                       equals
                                                                                                               equals
                                                                                                                                                                     equals a,t,g,
                                                                                                               a,t,g,
                                                       a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
Score 38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 38; DB 4; Length 329; Pred. No. 0.057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70; Indels
Length 6065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 297
```

```
B
                                                                                                                                                                                                                                                                                                                                                US-08-021-608D-9
                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-443-041A-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-443-041A-27
                                                                                                                                                                                                                                                                                                                  Sequence 9, Application US/08021608D Patent No. 5580760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Famodu, Omolayo O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 27, App.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 68; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 33
SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/443,041A
CURRENT FILING DATE: 1999-11-18
PRIOR APPLICATION NUMBER: 60/109,283
PRIOR FILING DATE: 1998-11-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Sterol Metabolism Enzymes
                       COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 1447
                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                        TITLE OF INVENTION: NOVEL FUSE BINDING TITLE OF INVENTION: PROTEIN AND GDNA THEREFOR
                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
FILING DATE:
                 APPLICATION NUMBER:
                                                                                                                                     COUNTRY:
                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                            1557 GTGGCTGGTTGATAGGAATCAAAAACTTTTCATCTCAAGAGTTTTTGGGGGCCTAGTATTCAA 1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5876 CTTAGGGGGAACATTGTAAAGAAACAAAAAGGTCCAGATGAATGTATGCTAGAAATAAAA 5935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1552 CTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGGGGGCCTAGTA 1611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66;
                                                                                                                       10154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.3%;
Similarity 58.4%;
                                                                                                                                                  NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09443041A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Orozco, Buddy
Rafalski, Antoni
                                                                                                                                                                                345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nilarity 57.6%;
Conservative
                                                                                                                                     USA
                                                                                                                                                                                                                                                                     LEVENS, DAY ROBERT C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                               MORGAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jennie
 22-FEB-1993
                                                                                                                                                                                                                                                       DAVID L., DUNCAN,
C., AND AVIGAN, MARK I.
NOVEL FUSE BINDING
                                                                                                                                                                                               & FINNEGAN
              US/08/021,608D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 37.8; DB 4;
Pred. No. 0.19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0.47;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

0;

CLASSIFICATION: 435 PRIOR APPLICATION DATA:

APPLICATION NUMBER:

```
RESULT 15
US-08-726-160-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: ; OTHER INFORMATION: US-08-021-608D-9
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 9, Application US/08726160
Patent No. 5734016
GENERAL INFORMATION:
APPLICANT: LEVENS, DAVID L., DUNCAN,
APPLICANT: ROBERT C., AND AVIGAN, MARK I.
APPLICANT: ROBERT C., AND AVIGAN, MARK I.
TITLE OF INVENTION: PROTEIN AND CDNA THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/726,160
FILING DATE: 04-CCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 26,728
REFERENCE/DOCKET NUMBER: 20)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 2381
TYPE: Nucletic acid
STRANDEDNESS: Double
TOPOLOGY: Unknown
MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: CDN
HYPOTHETICAL: NO
NUTT-SENSE: YES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTI-SENSE: YES
ORIGINAL SOURCE:
ORGANISM: Human
CELL LINE: HL60
CLASSIFICATION: 435
PRIOR APPLICATION UNBER: 08/021,608
FILING DATE: 22-FEB-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: WILLIAM S. FEILER
                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                       STATE: NEW YORK
                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1633 ТGATCAGAATGAAACAGAAAAAAAAAAAAAAAAAAA 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2260 AATGTATACTTTCACTTTCCAAATGCCTGTTTTGTGCTTTACAATAAATGATATGAAACC 2319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1573 AATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAA 1632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA 2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08726160
                                                                                                                                                                                                                                                                                                                                              345 PARK AVENUE
                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                  MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  470 bp variable region where R is A or
                                                                                                                                   US/08/726,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 37.8; DB Pred. No. 0.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2026-4063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

```
망
Search completed: September 13, 2004, 02:21:04 Job time : 92.1818 secs
                                                                В
                                                                                          Ş
                                                                                                                                                           S
                                                                                                                                                                                                                                                                US-08-726-160-9
                                                                                                                                                                                              Matches 60;
                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 2381
                                                                                                                                                                                                                                                                          FEATURE:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                            HYPOTHETICAL: NO ANTI-SENSE: YES ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                          TOPOLUGE TYPE: CH
                                                                                                                                                                                            Local Similarity 61.9 nes 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: WILLIAM S. FEILER REGISTRATION NUMBER: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: Nucleic acid
STRANDEDNESS: Doub
                                                                                                                                                                                                                                                                                                                               ORGANISM: Human
CELL LINE: HL60
                                                                                               1633 ТGATCAGAATGAAACAGAAAAAAAAAAAAAAAAAAAAA 1669
                                                                                                                               2260 AAIGTATACTTTCACTTTCCAAATGCCTGTTTTGTGCTTTACAATAAATGATATGAAACC 2319
                                                                                                                                                            1573 AATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAAAAA 1632
                                                                2320 ТСААВААААААААААААААААААААААААААААА
                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                Double
                                                                                                                                                                                                             2.3%;
                                                                                                                                                                                                                                                                              470 bp variable region where R is A or G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26,728
                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2026-4063US1
                                                                                                                                                                                                             Score 37.8; DB Pred. No. 0.28;
                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                               37;
                                                                                                                                                                                                                               Length 2381;
                                                                                                                                                                                               Indels
                                                                                                                                                                                               0;
                                                                                                                                                                                               Gaps
```

GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

Searched: Scoring table: Sequence: Run on: OM nucleic - nucleic search, using sw model Total number of hits satisfying chosen parameters: Perfect score: IDENTITY_NUC Gapop 10.0 , Gapext 1.0 US-10-080-960-1 1669 September 13, 2004, 00:41:56; Search time 570.019 Seconds (without alignments)
14732.148 Million cell updates/sec 3304383 seqs, 2515761380 residues 6608766

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database 10: 11: 12: 13: Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/PCT NEW PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06_NEW PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US07_NEW PUB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US07_NEW PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US07_NEW PUB.seq:* /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:* /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:* /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:* _6/ptodata/1/pubpna/US08_NEW_PUB.seq:* _6/ptodata/1/pubpna/US08_PUBCOMB.seq:* _6/ptodata/1/pubpna/US09A_PUBCOMB.seq:* _6/ptodata/1/pubpna/US08_ptodata/1/pubpna/US098_ _6/ptodata/1/pubpna/US098_ _6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
6/ptodata/1/pubpna/US09 NEW PUB.seq:*
-6/ptodata/1/pubpna/US09 NEW PUB.seq:*
-6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
-6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
-6/ptodata/1/pubpna/US10C_PUBCOMB.seq:* PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

0	score	Macch	масси непуси нь	5	11)	Description
1	1669	0.001	1669	14	US-10-080-960-1	Sequence 1, Appli
ი 2	1622	97.2	2937	10	US-09-814-353-20757	Sequence 20757, i
ω	1517.2	90.9	1942	9	US-09-731-872-43	Sequence 43, Appl
4		90.9	1942	10	US-09-876-997-43	Sequence 43, App.
υı		87.5	1461	14	US-10-080-960-3	Sequence 3, Appli
o.		34.8	597	11	US-09-864-408A-7105	Sequence 7105, Ap
7		27.1	530	10	US-09-814-353-16082	Sequence 16082, A
œ		27.0	495	10	US-09-814-353-3379	Sequence 3379, Ap
9		27.0	495	10	US-09-814-353-9698	Sequence 9698, Ap
10		19.4	378	9	US-09-764-877-187	Sequence 187, App
11		19.4	378	16	US-10-242-515-187	Sequence 187, App
12		17.9	1550	17	US-10-467-595-50	Sequence 50, Appl
13		10.8	1479	10	US-09-844-948-3	Sequence 3, Appl:
14		10.8	1479	13	US-10-184-648-21	Sequence 21, Appl

Ş

1 CACGCGTCCGCTCTGCTGCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT 60

n	0 0 0 0	00 00
44444	0 1 2 8 4 8 8 7 8 8 9 6	11111100000000000000000000000000000000
	4444 4400 4400 4440 4400 4400 4400 440	11111110000000000000000000000000000000
2 2 2 3 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	n n n n a a a a a a a	10.8 10.8 9.9 9.9 9.9 9.9 9.9 9.9 9.9 9.9 9.9 9
1275 1650 1813 234 234 413	174566 174566 3673778 1170 431 150 368 426 345 345	255555 1245557 5000667 15328 16435 17794 17355
9 13 13 13 15 15 15 15 15 15 15 15 15 15 15 15 15	15 15 15 15 15 15 15	1001100011000110001100011000110000
US-09-764-875-170 US-10-425-114-13904 US-09-764-846-19 US-09-764-83-19 US-09-880-107-236	US-10-235-192A US-10-020-141- US-10-312-841 US-10-312-963- US-10-437-963- US-10-437-963- US-10-060-036- US-10-060-375-4 US-09-814-353- US-09-814-353- US-09-814-353-	- 8D - 8D - 8D - 8D - 8D - 8D - 8D - 8D
Sequence 170, App Sequence 30550, A Sequence 13904, A Sequence 19, App1 Sequence 19, App1 Sequence 236, App	37, 1 1, A 15, 1 15, 1 3325, 3325, 2171 2171 13817 13817 1175,	652255

ALIGNMENTS

```
Sequence 1, Application US/10080960

Publication No. US20020197695A1

GENERAL INFORMATION:

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Meyers, Rachel

ITILE OF INVENTION: 80090, 52874, 52880, 63497, AND 33425

TITLE OF INVENTION: METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND USES THEREOF

FILE REFERENCE: 38155-20044.00

CURRENT APPLICATION NUMBER: US/10/080,960

CURRENT FILING DATE: 2001-10-19

PRIOR APPLICATION NUMBER: US 60/242,040

PRIOR APPLICATION NUMBER: US 60/242,038

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR RILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR APPLICATION NUMBER: US 60/242,637
                                                                                                                         LENGTH: 1669
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (163)...(1623)
US-10-080-960-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 1
US-10-080-960-1
Query Match 100.0%; Score 1669; Best Local Similarity 100.0%; Pred. No. 0; Matches 1669; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 37
                                                                   DB 14;
   0; Indels
                                                                   Length 1669;
      0; Gaps
          0
```

```
1021
                                                                                                         961
                                                                                                                                    196
                                                                                                                                                               901
                                                                                                                                                                                            901
                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                         GGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                  GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                                                                                                                                                                                                        CCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                                                                                                                              CATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                            CATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACGCGTCCGCTCTGCTGCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT
                                                                      TTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTG
                                                                                                                                                               CCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATTCATTTCTTAAGAAAGAATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                   1080
                                                                              1080
                                                                                                           1020
                                                                                                                                    1020
                                                                                                                                                                 960
                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
US-09-814-353-20757/c

US-09-814-353-20757, Application US/09814353

Publication No. US20030165831AI

GENERAL INFORMATION:

APPLICANT: Lilie, James

APPLICANT: Lilie, James

TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, TITLE OF INVENTION: THERAPY OF OVARIAN CANCER

FILE REFERENCE: MR1-006B

CURRENT APPLICATION NUMBER: US 60/191,031

PRIOR APPLICATION NUMBER: US 60/207,124

PRIOR APPLICATION NUMBER: US 60/211,940

PRIOR APPLICATION NUMBER: US 60/211,940

PRIOR APPLICATION NUMBER: US 60/211,940

PRIOR APPLICATION NUMBER: US 60/216,820

PRIOR APPLICATION NUMBER: US 60/216,820

PRIOR APPLICATION NUMBER: US 60/220,661

PRIOR APPLICATION NUMBER: US 60/220,661

PRIOR APPLICATION NUMBER: US 60/257,672

PRIOR FILING DATE: 2000-07-25

PRIOR FILING DATE: 2000-12-21

NUMBER OF SEQ ID NOS: 22037

SEQ ID NO 20757

LENGTH: 2937

TENGTH: 2937

TENGTH: 2937

TATES: DNA

CREANIEM: Homo sapiens

FEATURE:

NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGGAAATGGGGAAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGGAAATGGGGAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTAGTCCCTGTATATTACGGATCCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1560
```

성 유 성

밁

45 AG AG AG AG

밁

8

용 상 용 상 Ş

뮍

Ş В Š дb Ş 밁 Ş В δõ 뮍 Ś 멍 8 B Ś Вb Ś

us;

```
Matches 1642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 1
OTHER INFORMATION: n =
-09-814-353-20757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2817
                                                                                                   2101
                                                                                                                                                                    2161
                                                                                                                                                                                                                                                                                                     2281
                                                                                                                                                                                                                                                                                                                                                                      2341
                                                                                                                                                                                                                                                                                                                                                                                                                                      2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2937 CACGCGTCCGCTCTGCTGCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT
                                                                                                                                                                                                                                    2221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                 841
                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACGCGTCCGCTCTGCTGCTCTAGTGTTGACTTTGGCGTCTCAGGTGATCCATGACTTTT
                                                                                                                                                                                                                                                                                                                            CATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGGAAAATGGGAATTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAAGCCAATATAATTTCTTACTCCTTCTGGAGTGCTGCTTGGCTTTCACTCAGTGGTTT
GCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCT 1020
                                                   GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                                       CCACTAACTACCCAATACTTGGAGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                       CATALACCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTG
                                                                                                                                                                                                                                                                                                                                                                        GCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGGAGACTGGGGAGGTTAGGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGGTGGGA----TCGCAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTTTTTTTTTTGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAAAGCCAATATAATTTCTTACTCCTTCTGGAGTGCTGCTTGGCTTTCACTCAGTGGTTT
                                 GACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAG
                                                                                                                                                                      CCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                      GCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97.2%;
ilarity 99.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A,T,C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1622; DB 10;
Pred. No. 0;
0; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2878
                                                                                                                                                                      2102
                                                                                                                                                                                                                                                                                                                                                                                                                                        2342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                    2042
                                                                                                                                                                                                      840
                                                                                                                                                                                                                                     2162
                                                                                                                                                                                                                                                                                                       2222
                                                                                                                                                                                                                                                                                                                                                                        2282
                                                                                                                                                                                                                                                                                                                                                                                                        660
                                     1982
                                                                    960
                                                                                                                                    900
                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                       720
                                                                            APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Bouqueleret, Lydie
APPLICANT: Bouqueleret, Lydie
APPLICANT: Jobert, Severin
TITLE OF INVENTION: FULL-LENGTH HUMAN CDNAS ENCODING POT
FILE REFERENCE: 78. US3.REG
CURRENT APPLICATION NUMBER: US/09/731,872
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR FILING DATE: 1999-12-08
JENOR FILING DATE: 2000-03-06
NUMBER OF SEQ ID NOS: 482
SOFTWARE: Patent.pm
SEQ ID NO 43
LENGTH: 1942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
US-09-731-872-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                        ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     Sequence 43, Application US/09731872
Patent No. US20020102604A1
 TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: 334..1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGATTTCAAAAATGATCAGAATGAAACAGAAAAAAA 1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAGATETGGATTTCCAGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCCAGAGCCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGACAATTACATCGATGCATTTGAGTGTATGGTGCACCAAGGTGTGGGCTAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGGACCAAGGTGTGGGCTAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGGAAATGGGGGAGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTAACCÁGCGACTTCTGACAGCTCTCAGGGÁACGGAAÁTGGGGÁGTGCAAGACGTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGATTTCAAAAATGATCAGAATGAAACAGAAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCTTCAGGAAAAGGGCTTACCACCCAAAAAGATGGGAAGGCAGAAGATACCCACCTGAGT
                                                                                                                                                                                                                                                                          POTENTIALLY SECRETED PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1802
```

망

Ş

8 8

 성 음 성

문

 Ş

망양

Ş

80

망

```
В
                                    ď
                                                    δ
                                                                              밁
                                                                                                  Ś
                                                                                                                    밁
                                                                                                                                          Ş
                                                                                                                                                                                    δ
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY: sig_peptide
; LOCATION: 334..426
; OTHER INFORMATION: Von Heijne matrix
; OTHER INFORMATION: score 4.0554926521937
; OTHER INFORMATION: seq TVFLLVTLQALDT/VE
US-09-731-872-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 90.9%; Score 1517.2; DB 9; Best Local Similarity 99.1%; Pred. No. 0; Matches 1536; Conservative 0; Mismatches 13;
                1018
                                                                                1174
                                                                                                                           1114
                                                                                                                                                                       1054
                                                         958
                                                                                                     898
                                                                                                                                               838
                                                                                                                                                                                                                994
                                                                                                                                                                                           778
                                                                                                                                                                                                                                      718
                                                                                                                                                                                                                                                           934
                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                        874
                                                                                                                                                                                                                                                                                                                            598
                                                                                                                                                                                                                                                                                                                                                 814
                                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                                                                                                                                                                                                                                                                                                             754
                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                        694
                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118
                                                                              TITITITITITITTTGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC
GCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAA
                                                                                                                                                                    TIGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTA 777
                                                                                                                                                                                                                                                                                                                                                CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA
                                                  CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA 1017
                                                                                                                                      TCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATC
                                                                                                                                                                                  TTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCAC
                                                                                                                                                                                                                                                                                                                   AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTAATTCATTTCTTAAGAAAGAAGATTGACCTTCAACAGGAAAAGAAAATATGGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAAC
                                                                                                                          TCATACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATC
                                                                                                                                                                                                                                                          TTTCATAAACCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCAC
                                                                                                                                                                                                                                                                                                      AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                       GACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGGAGACTGGGAGGTTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1942;
                                     1293
                                                                              1233
                                                                                                     957
                                                                                                                         1173
                                                                                                                                                                    1113
                                                                                                                                                                                                                1053
                                                                                                                                                                                                                                                                                                                                                                      597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                               897
                                                                                                                                                                                         837
                                                                                                                                                                                                                                                          993
                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                      933
                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        417
                                                                                                                                                                                                                                                                                                                                                                                             813
                                                                                                                                                                                                                                                                                                                                                                                                                 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               453
                                                                                                                                                                                                                                                                                                                                                                                                                                       753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177
```

US-09-876-997-43

US-09-876-997-43

Sequence 43, Application US/09876997

Publication No. US20030152921A1

SEQUENCE INFORMATION:

APPLICANT: Dumas Wiline Edwards, Jean Baptiste

APPLICANT: Bougueleret, Lydie

APPLICANT: Jobert, Severin

TITLE OF INVENTION: FULL-LENGTH HUMAN CDNAS ENCODING POTENTIALLY SECRETED PROTEINS

FILE REFERENCE: 78 US4. CIP

CURRENT APPLICATION NUMBER: US/09/876,997

CURRENT FILING DATE: 2000-12-0-6-08

PRIOR APPLICATION NUMBER: US 60/187,470

PRIOR APPLICATION NUMBER: US 60/187,470

PRIOR FILING DATE: 2000-12-0-6

PRIOR FILING DATE: 2000-03-0-6

PRIOR APPLICATION NUMBER: US 60/189,629

PRIOR FILING DATE: 1999-12-08

NUMBER OF SEQ ID NOS: 482

SOFTWARE: Patent.pm

SEQ ID NO 43

LENGTH: 1942

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY: CDS

LOCATION: 334..1551

NAME/KEY: S14_Deptide

LOCATION: 334..1561

LOCATION: 334..466

OTHER INFORMATION: Von Heijne matrix

```
; OTHER INFORMATION: ; OTHER INFORMATION: US-09-876-997-43
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                   밁
                                    Ş
                                                           맑
                                                                          ୃତ୍
                                                                                                     돲
                                                                                                                      S
                                                                                                                                                片
                                                                                                                                                                 Ś
                                                                                                                                                                                         В
                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 1536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atch 90.9%; cal Similarity 99.1%; 1536; Conservative
                                         1018
                                                              1234
                                                                                                      1174
                                                                                                                                                1114
                                                                                                                                                                                         1054
                                                                                                                           898
                                                                                                                                                                     838
                                                                                                                                                                                                               778
                                                                                                                                                                                                                                   994
                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                            934
                                                                                                                                                                                                                                                                                                 859
                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                               814
                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                          754
                                                                                                                                                                                                                                                                                                                                                                                                                              478
                                                                                                                                                                                                                                                                                                                                                                                                                                                   694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTCTGCTTGTCACACTCCAGGCCTTGGATACCGTTGAGAATCTAATGAAAGTCACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITITITITITITITITIGGCCITGGATACCGTTGAGAATCTAATGAAAGTCACGGGC 177
                                                                                                                                                                                                                                                                                         TITCATAAACCAGIGATIACCIIGITCAACTACACIGCCACGITCAGCAGGCATICCCAC 717
                                                                                                                                                                                                                                                                                                                                    AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTC
                                                                                                                                                                                                                                                                                                                                                                GACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGGTTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCAGGAGCAGCACATAAAAGAGGTCATGGTTGAGCTGGGGAAGTTTTGAAAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAGTGGCCTTTATCTAAC
                                                                         CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA 1017
                                                                                                                   TCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATC
                                                                                                                                                                                           TTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTA 777
                                                                                                                                                                                                                                                                                                                       AAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                          GACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAATGGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAG
                                 GCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGGCCACTGAAA
                                                             CCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTA 1293
                                                                                                       TCATACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATC
                                                                                                                                                                                                                                     TTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTA
CTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAAC 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               score 4.0554926521937 seq TVFLLVTLQALDT/VE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Score 1517.2;
; Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                     1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     453
                                          1077
                                                                                                          1233
                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                 873
                                                                                                                                                                                                                                                                                                                                                                                                           813
                                                                                                                                                                                                                                                                                                                                                                                                                               537
                                                                                                                                                                                                                                                                                                                                                                                                                                                     753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 573
                                                                                                                                                  1173
                                                                                                                                                                                            1113
                                                                                                                                                                                                                                                                               993
                                                                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                       897
                                                                                                                                                                                                                 837
                                                                                                                                                                                                                                                                                                                         933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   먉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
```

```
Sequence 3, Application US/10080960
; Sequence 3, Application WS/20020197695A1
; GENERAL INFORMATION:
   APPLICANT: Millennium Pharmaceuticals, Inc.
   APPLICANT: Glucksmann, Maria
   APPLICANT: Meyers, Rachel
; APPLICANT: Meyers, Rachel
; TITLE OF INVENTION: METHODS AND COMPOSITIONS OF
   FILE REFERENCE: 38155-20044.00
; CURRENT APPLICATION NUMBER: US/10/080,960
; CURRENT APPLICATION NUMBER: US 60/242,040
pRIOR APPLICATION NUMBER: US 60/242,040
pRIOR APPLICATION NUMBER: US 60/242,038
pRIOR APPLICATION NUMBER: US 60/242,038
pRIOR APPLICATION NUMBER: US 60/241,992
pRIOR FILING DATE: 2000-10-20
pRIOR APPLICATION NUMBER: US 60/241,992
pRIOR FILING DATE: 2000-10-20
pRIOR APPLICATION NUMBER: US 60/242,637
pRIOR APPLICATION NUMBER: US 60/242,637
pRIOR APPLICATION NUMBER: US 60/242,637
pRIOR FILING DATE: 2000-10-23
; SUMBER OF SEG ID NOS: 37
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NOS 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-10-080-960-3
                                                                                               US-10-080-960-3
Query Match 87.5%; Score 1461; I Best Local Similarity 100.0%; Pred. No. 0; Matches 1461; Conservative 0; Mismatches
                                                                                                                LENGTH: 1461
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGA 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGGGGCCCTAGTATTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGCGAGAGATTTCCAGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TIGCGAGAGATGIGGATITCCAGCTITGAACAATCCAAGAAAGAAGCCCAGGCACTAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTIGCCCAGAGCCCACAGIGITITGCITICTCACCACTCCGGACTCCACCITIGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCCTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGT-AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGGCCTAGTATTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAAGATGGGAGGCAGAAGATACCCACCTG
                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND 33425
OF HUMAN PROTEINS AND USES THEREOF
                                                    14;
       0
                                                    Length
                                                       1461;
       0
       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1377
          0
```

```
1123
                                                                                                                                                                          1063
                                                                                                                                                                                                                                    1003
                                                                                                                                              901
                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                             943
                                                                                                                                                                                                                                                                                                                                                       883
                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                               823
                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                             GCAAGTTACATCAGACGACTGGATTCTGACAGATTGTATGAGGCCCTATGTAGAATGG
AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACCGGAAATGG
                         GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                        TGGCTTCCAAGIAACAAAAGIGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACIG
                                                                                                                                                              TGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                         TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                   CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                          CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                   CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                    TGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                      TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                       CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                             TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                 CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGGGAGGTTAGGCCAATGTGGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGAAAGTCACGGGCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                          1080
                                                        1242
                                                                                    1020
                                                                                                                1182
                                                                                                                                                                         1122
                                                                                                                                                                                                                                 1062
                                                                                                                                                                                                                                                                                           1002
                                                                                                                                                                                                                                                                                                                                                                                                       882
                                                                                                                                             960
                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                     942
                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       822
                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     222
            밁
                                  Ş
                                                                    밁
                                                                                         S
                                                                                                                          В
                                                                                                                                                       S
                                                                                                                                                                                     В
                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유정
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1543
                                       864
                                                                    180
                                                                                                  804
                                                                                                                              120
                                                                                                                                                                                                                                                                                                           594;
                                                                                                                                                                                       60
                                                                                                                                                GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT
            GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT
                                                                    TAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAG
                                                                                            TAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAG
```

뫄 Ś

Ś 밁 Š 밁 Ś В Š 맑 8 밁 Ş Вb Š 밁 Š 뮍 Ś 밁 Ş

```
GGCCTAGTATTCAAGGACTGA 1623
                                                                                                                                  GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG 1602
                                                                                                                                                                                                                       GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTTCTCACCACCTCCGGACT 1482
                                                                                                                                                                                                                                                                                                                                                                                                                       AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA 1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG 1440
                                                                                                                                                                                           GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC 1200
                                                                                                                                                                                                                                                                                                                                                                                  AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAAGGGCTTACCACCCAAAAAGATGGGAGGCA
                                                                                                                                                                                           1380
                                                                                                                                                                                                                                        1542
                                                                                                                                                                                                                                                                                     1320
```

RESULT 6
US-09-864-408A-7105
(Sequence 7105, Application US/09864408A)
(Sequence 7105, Application US/09864408A)
(Publication No. US20040009474A1)
(Publication Noumber: US/09/864,408A)
(Publication Noumber: US/09/864,408A)
(Publication Noumber: 001-05-24)
(Publication Noumber: 60/206,650)
(Publication Noumber: 60/206,650)
(Publication Noumber: 60/206,650)
(Publication Noumber: 60/206,650)
(Publication Noumber: 000-05-24)
(Publication Noumber: 60/206,650)
(Publication Noumber: 6 624 TCATGAAGAGTCCCCGAAAAACAAITATAAGCTCTTTCATAAACCAGTGATTACCTTGTT Similarity Conservative 34.8%; Score 581.2; DB 11; Pred. No. 5.4e-167; 0; Mismatches 3; <u>ب</u>

803 119

299 923 239 863 179 59

743

Вþ Ş B δ B Ş D, Ś В Š В 8 В Ş В

```
APPLICANT: Lie, John
APPLICANT: Thompson, Pamela
APPLICANT: Tille, James
APPLICANT: Lille, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF CVARIAN CANCER
FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US 60/9814,353
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: US 60/191,031
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-15
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR FILING DATE: 2000-07-25
PRIOR FILING DATE: 2000-07-25
PRIOR FILING DATE: 2000-12-21
NUMBER OF SEQ ID NOS: 22037
SOFTWARE: FASUSEQ for Windows Version 4.0
SEGUTH: 530
TYDE: DNA
                                                                     밁
                                                                                                  δ
                                                                                                                                                     멍
                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                ; LENGTH: 530
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-814-353-16082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
US-09-814-353-16082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 16082, Application US/09814353
Publication No. US20030165831A1
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1044
                                                                     190
                                                                                                                                                                                                                                                                             825 GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      924
                                                                                                                                                                                                                                                                                                                                    456;
                                                                                                                                                                                                                                          70 GGCCGAGGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT 129
                                                                                                                                                                                                                                                                                                                               h 27.1%;
Similarity 98.9%;
56; Conservative
TAAGTITATCCTAGCTITTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                  GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 1004
                                                                                                                                                                              TTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTG 1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATT 116:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACGG 110:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTATAGGATCATIGCACAGTATAAGITTATCCTAGCTTTTGAGAATGCAGITTGTGATGA 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTT 983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCTCACCCCAGGGAACTGGCAAGTTATATCAGACGACTGGATTCTGATGACAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACGG 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGA 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATT 539
                                                                                                                                                                                                                                                                                                                             Score 453; DB 10
Pred. No. 1e-127;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                       DB 10; Length 530;
                                                                                                                                                                                                                                                                                                                               5; Indels
                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          597
                         1064
                                                                                                                                                                                                 944
                                                                                                                                                                                                                                                                                    884
                                                                     249
                                                                                                                                                       189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359
```

```
NUMBER OF SEQ ID NOS: 22037

SOFTWARE: FastSEQ for Windows Version 4.

SEQ ID NO 3379

LENGTH: 495

TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: 368, 444

COTHER INFORMATION: n = A,T,C or G
밁
                                    Ś
                                                                                       밁
                                                                                                                              Ś
                                                                                                                                                                                  밁
                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                      US-09-814-353-3379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: MRI-006B

CURRENT APPLICATION NUMBER: US/09/814,353

CURRENT FILING DATE: 2001-03-21

PRIOR APPLICATION NUMBER: US 60/191,031

PRIOR FILING DATE: 2000-03-21

PRIOR PPLICATION NUMBER: US 60/207,124

PRIOR APPLICATION NUMBER: US 60/211,940

PRIOR APPLICATION NUMBER: US 60/216,820

PRIOR APPLICATION NUMBER: US 60/216,820

PRIOR APPLICATION NUMBER: US 60/216,820

PRIOR APPLICATION NUMBER: US 60/220,661

PRIOR FILING DATE: 2000-07-25

PRIOR APPLICATION NUMBER: US 60/220,661

PRIOR APPLICATION NUMBER: US 60/257,672

PRIOR FILING DATE: 2000-12-21

NUMBER OF SECTION NUMBER: US 60/257,672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-09-814-353-3379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 467; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3379, Application US/09814353
Publication No. US20030165831A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Lee, John
APPLICANT: Thompson, Pamela
APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  370
                                                                                                                                                                                                                              825 GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          310 GAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                  17
                                                                                       77
                                                                                                                  GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGGC 1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCCAGCATCACAGACTG
                                                                                       GGCCGAGGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTC 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTC 1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAA 1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
GCAGCTGAAGAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGC
                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                        27.0%;
                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                       Score 450.6; DB 10;
Pred. No. 5.5e-127;
0; Mismatches 11;
                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FOR
                                                                                                                                                                                                                                                                         Gaps
196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1124
                                                                                       136
                                                                                                                                      944
                                                                                                                                                                                  76
                                                                                                                                                                                                                                884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
```

```
APPLICANT: Thompson, Pamela
APPLICANT: Lillie, James
APPLICANT: Lillie, James
APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS,
TITLE OF INVENTION: TENTIFICATION, ASSESSMENT, PR
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER
FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR FILING DATE: 2000-05-25
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR FILING DATE: 2000-06-15
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR FILING DATE: 2000-12-21
NUMBER OF SEQ ID NOS: 22037
                   Ş
                                                    밁
                                                                                     Ş
                                                                                                                           멍
                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
US-09-814-353-9698
; Sequence 9698, Application US/09814353
; Publication No. US20030165831A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                          US-09-814-353-9698
                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9698
LENGTH: 495
                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
LOCATION: 368, 444
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                LENGTH: 495
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1065
                                                                                                                                                                                                 467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257
                   945
                                                                                        885
                                                                                                                                                                  825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               437
                                                        77
                                                                                                                           17
                                                                                                                                                                                                                    Similarity
GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA
                                                                                                                                                        GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCCACTGAAACTGGGGGT-AGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT
                                                        CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCCTATGTAGAATGGA 1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                             GGCCGAGGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTGAANGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAAGGAACCGAAATGG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCCACTGAAACTGGGGGTAAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAAGCCTATGTACAATGGA
                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                    27.0%;
97.5%;
                                                                                                                                                                                                                                                                                          A,T,C
                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                   Score 450.6; DB 10;
Pred. No. 5.5e-127;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                            ດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KITS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PREVENTION, AND
                                                                                                                                                                                                                                      Length 495;
                                                        . 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1064
                       1004
                                                                                          944
                                                                                                                             76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/764,877
CURRENT FILING DATE: 2001-01-17
Prior application data removed - refer to PA
NUMBER OF SEQ ID NOS: 4031
SOFTWARE: PAtentin Ver. 2.0
SEQ ID NO 187
LENGTH: 378
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-09-764-877-187
; Sequence 187, Application US/09764877
; Patent No. US20020147140A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                 밁
                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                Ś
                                                                       밁
                                                                                                        Ş
                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-764-877-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 363; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Rosen et al. TITLE OF INVENTION: Nucleic Acids, Proteins, FILE REFERENCE: PC005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: SITE
LOCATION: (347)
OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                            934
                                                                                                                                                 181
                                                                                                                                                                                                                                                           814
                                                                                                                                                                                                                                                                                                                   754 GTCCTGAAGTCACTCCGATACCCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                             694 GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137 GCAGCTGAAGAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 196
                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                     ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGA 1243
                       ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT 1053
                                                                                                GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCCACTGAAACTGGGGGT-AGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                           GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                   GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                              GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                        CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGGACAGCTAT
                                                                                                                                                                                                                                             CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGAANGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAAGGAACCGAAATGG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCTAAGGGAAACGGAAATGG 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAAGCCTATGTACAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCANGGAACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCCACTGAAACTGGGGGTAAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 323.8; DB 9 Pred. No. 3.6e-88; 0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PALM
         GAGATGCATTTGTGATGA-NACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or file wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                             .
8
                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  378;
                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1123
         355
                                                                                                                993
                                                                                                                                                                                     933
                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                   813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                       60
```

1054 GAGAAGTTCTGGAGGC 1069

```
; LENGTH: 378
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (347)
; OTHER INFORMATION: n equals a,t,g, or c
US-10-242-515-187
Š
                                                                                                                                                                                                                                                                   Ď,
                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-10-242-515-187
                                                                                                                                                               뮍
                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 09/764,877
PRIOR FILING DATE: 2001-01-17
PRIOR FILING DATE: 2000-01-31
PRIOR FILING DATE: 2000-01-31
PRIOR FILING DATE: 2000-01-31
PRIOR PRIOR APPLICATION NUMBER: 60/180,628
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR PILING DATE: 2000-02-04
PRIOR PILING DATE: 2000-06-28
PRIOR PILING DATE: 2000-06-28
PRIOR FILING DATE: 2000-07-11
PRIOR PRIOR PRIOR NUMBER: 60/217,487
PRIOR PRIOR DATE: 2000-09-14
PRIOR PILING DATE: 2000-09-14
PRIOR PILING DATE: 2000-07-26
PRIOR PILING DATE: 2000-07-26
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-11
PRIOR APPLICATION NUMBER: 60/217,496
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-14
PRIOR PILING DATE: 2000-08-14
PRIOR PILING DATE: 2000-08-14
PRIOR PILING DATE: 2000-08-14
PRIOR FILING DATE: 2000-08-14
PRIOR FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 4031
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 187, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: PC005C1
CURRENT APPLICATION NUMBER: US/10/242,515
CURRENT FILING DATE: 2002-09-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 19.4%;
Local Similarity 96.5%;
                                                                                                                                                                                                              814
     934
                                                            181
                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                       754 GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGA 813
                                                                                                                                                                                                                                                                                                                                                                                                          694 GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363; Conservative
                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                   GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAGA
     GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                           GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA 933
                                                                                                                                                               CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                 CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT 873
                                                                                                                                                                                                                                                                                                                                                                         GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGAAGTTCTGGAGGC 371
                                                         GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10242515
o. US20040009488A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 323.8; DB 1
Pred. No. 3.6e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 16; Length 378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۍ
۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
     993
                                                                                                                                                               180
                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                            60
                                                         240
```

```
APPLICANT: GANDHI, Ameena R., BURFORD, Neil;
APPLICANT: TEANGAVELU, Kavitha; ELLIOTT, Vicki S.;
APPLICANT: LAL, Preeti G.; TANG, Y. Tom;
APPLICANT: SWARNAKAR, Anita; YAO, Monique G.;
APPLICANT: WALLA, Narinder K.; POLICKY, Jennifer L.;
APPLICANT: WALLA, Narinder K.; POLICKY, Jennifer L.;
APPLICANT: WALLA, Narinder K.; POLICKY, Jennifer L.;
APPLICANT: AL-YOUNG, Janice K.; BAUGHN, Mariah R.;
APPLICANT: AL-YOUNG, Janice K.; BAUGHN, Mariah R.;
APPLICANT: AL-YOUNG, Janice K.; BAUGHN, Mariah R.;
APPLICANT: KAREHT, Stephanie K.; TAN, Uyen K.;
APPLICANT: KAREHT, Stephanie K.; TRAN, Uyen K.;
APPLICANT: KAREHT, Stephanie K.; TRAN, Uyen K.;
APPLICANT: MARCUS, Gregory A.; EMERLING, Brook M.;
APPLICANT: MARCUS, Gregory A.; EMERLING, Brook M.;
APPLICANT: MARCUS, Gregory A.; EMERLING, Brook M.;
APPLICANT: MARCUS, GREGORY A.; AND MEMBRANE-ASSOCIATED PROTEINS
TITLE OF INVENTION: RECEPTORS AND MEMBRANE-ASSOCIATED PROTEINS
FILE REPERENCE: PF-0894 PCT
CURRENT APPLICATION NUMBER: US 60/267,201
PRIOR APPLICATION NUMBER: US 60/267,201
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR FILLING DATE: 2001-02-06
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR APPLICATION NUMBER: US 60/288,295
                                                                            닭
                                                                                                                                 Ś
                                                                                                                                                                                       밁
                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1550
TYPE: DNA
TYPE: DNA
CORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No: 1953366CB1
US-10-467-595-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-467-595-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 50
LENGTH: 1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 50, Application US/10467595 Publication No. US20040166501A1
                                                                                                                                                                                                                                                                                               Matches 298;
                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
SOFTWARE: PERL Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: AZIMZAI, Yalda; YUE, Henry; APPLICANT: DING, Li; NGUYEN, Danniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 2002-01-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1054 GAGAAGTTCTGGAGGC 1069
                                                                                                                                                                                          185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               994 ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT 1053
383 GATTGACCTTCAACAGGAAAAGAAAATGGGAAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                356 GGGAAGTTCTGGAGGC 371
                                                                                                                                                                                                                                          263 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                            AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A-TGCACAGTATAAGTTTATCCTAGCTTT---GAGATGCATTTGTGATGA-NACATCACT 355
                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID NOS: 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Li; NGUYEN, Danniel B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-01-14
                                                                                                                                                                                                                                                                                                                         17.9%; Score 298; DB 17; 100.0%; Pred. No. 7.6e-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/348,687
                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                               Length 1550;
                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                               Gaps
                                 442
                                                                                    304
                                                                                                                                       382
                                                                                                                                                                                          244
                                                                                                                                                                                                                                               322
```

В Ś 밁

5

1027 1270

1330

1210

967

1150

1090

907

1030

847

```
GENERAL INFORMATION:

APPLICANT: Meyers, Rachel A.

APPLICANT: Williamson, Mark

ITILE OF INVENTION: 32132, A NOVEL FUCOSYLTRANSFERASE FAMILY

TITLE OF INVENTION: MEMBER AND USES THEREFOR

FILE REFERENCE: 10448-048001

CURRENT APPLICATION NUMBER: US/09/844,948

CURRENT FILING DATE: 2001-04-24

PRIOR APPLICATION NUMBER: US 60/200,604

PRIOR APPLICATION NUMBER: US 60/200,604

PRIOR FILING DATE: 2000-04-28

NUMBER OF SEG ID NOS: 6

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
US-09-844-948-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-844-948-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application US/09844948 Publication No. US20030119161A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 489; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 1479
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                          920
                                                                                                                                                       899
                                                                                                                                                                                                                       860
                                                                                                                                                                                                                                                                                    809
                                                                                                                                                                                                                                                                                                                                                800
                                                                                                                                                                                                                                                                                                                                                                                                                551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              443
                                 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          305
                                 GCCTGCAGAATCGGGAGCTGCCTACCGCGCGCTACAGGACACAGCCACGGCCACCACCG
                                                                                              GTTTACGAAACAAAGACCTCCCT-----
                                                                                                                                                                                                                    ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT
                                                                                                                                                                                                                                                                                                                                                AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOTTCAATOTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCACGGCCCGGGCATCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCACAGACTTCCGCGCGCCGCCCCCGCTGCCGCGCCTGGCGCACCAGAGCTGGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTATTCCCCCACTTCCCGGGAGACTCGGAGCGCA-TCGAGTGTGCGCGCGCGCGCGTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  egregricococoreaceses es acresos 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACCATCAACCGGACCTACCTCCATCACATGACCAAAGCATTCCTCTTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTCCCCGCTGACGGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                       GGCGCCGCCGCGGCTACGCGCCGCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                TGCCCGGGACCGCCTATCT---GCGCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         тевававсяттваавтестваавтеастерватасставттесттвеавтесаалаваеса
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10.8%; ilarity 51.8%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 180.8; DB 10;
Pred. No. 6.6e-44;
0; Mismatches 442;
                                                                                              - CAGCAGCTGAAAAATCCAGCCTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 560
                                                                                                                                                                                                                       919
                                                                                                                                                                                                                                                                                                                                                                                                                607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          364
                                 787
                                                                                                 970
                                                                                                                                                                                                                                                                                       667
                                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              502
                                                                                                                                                       727
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Olandt, Peter J.

TITLE OF INVENTION: NOVEL HUMAN TRANSFERASE FAN
FILE REFERENCE: 10448-192001

CURRENT APPLICATION NUMBER: US/10/184,648

CURRENT FILING DATE: 2002-06-27

FRIOR RILING DATE: 2001-03-22

PRIOR APPLICATION NUMBER: PCT/US01/09358

PRIOR PPLICATION NUMBER: PCT/US01/09358

PRIOR FILING DATE: 2001-03-22

PRIOR APPLICATION NUMBER: US 60/191,964

PRIOR APPLICATION NUMBER: US 60/191,964

PRIOR APPLICATION NUMBER: US 09/801,220

PRIOR APPLICATION NUMBER: US 09/801/220

PRIOR FILING DATE: 2001-03-07

PRIOR PILING DATE: 2001-03-07

PRIOR FILING DATE: 2001-03-07

PRIOR APPLICATION NUMBER: US 60/187,456

PRIOR APPLICATION NUMBER: US 60/187,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
US-10-184-648-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                    PRIOR FILING DATE: 2000-03-07
PRIOR APPLICATION NUMBER: US 09/816,714
PRIOR APPLICATION NUMBER: US 09/816,714
PRIOR FILING DATE: 2001-03-23
PRIOR PELICATION NUMBER: PCT/US01/09468
PRIOR APPLICATION NUMBER: US 60/191,865
PRIOR PILING DATE: 2000-03-24
PRIOR APPLICATION NUMBER: US 09/844,948
PRIOR APPLICATION NUMBER: US 09/844,948
PRIOR APPLICATION NUMBER: PCT/US01/13805
PRIOR APPLICATION NUMBER: PCT/US01/13805
PRIOR APPLICATION NUMBER: US 60/200,604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 21, Application US/10184648 Publication No. US20030224376A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Meyers, Rachel APPLICANT: Williamson, Marticant: Tsai, Fong-Yir
R FILING DATE:
R APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Williamson, Mark
Tsai, Fong-Ying
Hunter, John J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAACAATCACTCCGTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGCGCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MacBeth, Kyle J.
Rudolph-Owen, Laura A.
Leiby, Kevin R.
Kapeller-Libermann, Rosana
   : 2000-04-28
NUMBER: US 09/861,164
: 2001-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FAMILY MEMBERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USES
```

δð

5 맑 8 밁 Ş 밁 Ş 멍 8 밁 Š 망 Ş 밁 Ş 멼

```
Ş
                                                                                                      밁
                                                                                                                                                  Ş
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-184-648-21
                                                                                                                                                                                                                                                                                                           Best Local
Matches 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ
SEQ ID NO 21
                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 2000-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1479
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO 21
TH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/19543
FILING DATE: 2001-06-15
APPLICATION NUMBER: US 60/211,730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2001-03-26
APPLICATION NUMBER: PCT/US01/09633
FILING DATE: 2001-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 60/267,494
FILING DATE: 2001-02-08
APPLICATION NUMBER: US 09/817,910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2000-10-06
APPLICATION NUMBER: US 10/072,285
FILING DATE: 2002-02-08
APPLICATION NUMBER: PCT/US02/03736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2000-06-15
APPLICATION NUMBER: US 09/882,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2001-04-25
APPLICATION NUMBER: PCT/US01/40607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 60/192,092
FILING DATE: 2000-03-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 09/973,457
FILING DATE: 2001-10-09
APPLICATION NUMBER: US 60/238,849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2001-09-25
APPLICATION NUMBER: PCT/US01/29963
FILING DATE: 2001-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 60/212,079
FILING DATE: 2000-06-15
APPLICATION NUMBER: US 09/962,678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/16292
FILING DATE: 2001-05-18
APPLICATION NUMBER: US 60/205,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US01/19152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 09/882,836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 60/199,500 FILING DATE: 2000-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2002-02-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/235,044 FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 09/883,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2001-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 09/842,528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/19138
                                                                                                                                                                                                                                                                                                        cal Similarity 489; Conserved
                                                    560
371
                                                                                                      311
                                                                                                                                                        500
                                                                                                                                                                                                             252
                                                                                                                                                                                                                                                            440
GCACAGACTTCCGCGCGTCGGCCGCCCGCTGCCGCGCCTGGCGCACCAGAGCTGGGCGC
                                                 GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTG
                                                                                                                                                  TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG
                                                                                                                                                                                                          GCTATTCCCCCACTTCCCGGGAGACTCGGAGCGCGA-TCGAGTGTGCGCGCGCGCGCGTGCG
                                                                                                                                                                                                                                                            egregreecegeseseses de la constant d
                                                                                                      DATE: 2000-05-19
                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-06-
                                                                                                                                                                                                                                                                                                                                    10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/212,079
                                                                                                                                                                                                                                                                                                           Score 180.8; DB 13; Length 1479; Pred. No. 6.6e-44; 0; Mismatches 442; Indels 13;
                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                              499
430
                                                 619
                                                                                                   370
                                                                                                                                                        559
                                                                                                                                                                                                       310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-844-948-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 740
```

```
APPLICANT: Williamson, Mark
IAPPLICANT: Williamson, Mark
ITITLE OF INVENTION: 3212, A NOVEL FUCOSYLTRANSFERASE FAMILY
ITITLE OF INVENTION: MEMBER AND USES THEREFOR
ITITLE OF INVENTION: MEMBER: US/09/844,948
CURRENT APPLICATION NUMBER: US/09/844,948
CURRENT FILING DATE: 2001-04-24
PRIOR APPLICATION NUMBER: US 60/200,604
PRIOR APPLICATION NUMBER: US 60/200,604
PRIOR FILING DATE: 2000-04-28
NUMBER OF SEQ ID NOS: 6
SOFTMARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENCTH: 2557
                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09844948 
Publication No. US20030119161A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTCAACGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGTTTGTGATGACTACATCACTGAGAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOTTCAATOTTACOTOCACOTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   recretaceageagregecereaacaacrrerrecreaeceaececegecareegec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTTACGAAACAAAGACCTCCCT-----CAGCAGCTGAAAAATCCAGCCTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCGCCGCCGCGGCTACGCCCCCCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCCCGGGACCGCCTATCT---GCGCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAACAATCACTCCGTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          667
```

```
밁
                                                                                                                                Š
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo sapiens ; FEATURE: ; NAME/KEY: CDS ; LOCATION: (236)...(1711) US-09-844-948-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 10.8%;
Best Local Similarity 51.8%;
Matches 489; Conservative
                   1331
                                                                                1323
                                                                                                                                       1271
                                                                                                                                                                                                                                                                                                                        1203
                                                                                                                                                                                                                                                                                                                                                                                  1151
                                                                                                                                                                                                                                                                                                                                                                                                                                               1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1023
                                                                                                                                                                                                    1263
                                                                                                                                                                                                                                                           1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     440 GGTGGTCCCCGCTGACGGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487 GCTATTCCCCCACTTCCCGGGAGACTCGGAGCGCA-TCGAGTGTGCGCGCGCGCGCGTGCG
                                                                                                                          GACTTCTGACAGCTCTCAGGGAACGGGAAATGGGGGAGGTGCAAGGCGTCAACCAGGACAATT
                                                                                                                                                                                                                                                    ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC 1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGTITGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTACGAAACAAGACCTCCCT-----CAGCAGCTGAAAAATCCAGCCTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG
ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT
                                                                                TTĊTTĊTGGATAGTĊTGAAGCATCGGGAGTGGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                     TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                               CCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GÉCECCECCECE TACECECCECTECTATCTECA ET CACACTECEA CETECCA ECE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOTTCAATOTTACOTCCACOTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTCCACGAGGAGTCGCCCTCAACAACTTCTTGCTGAGCCACGGCCCCGGGCATCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ттттсатсаясастссссвалаласантатальсстсттсаталассастсаттасст
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCACAGACTTCCGCGCGTCGGCCCCCCCCCCCCCGCGCCCTGGCGCACCAGAGCTGGGCGC

фтастоасттвасатадатадствестствестсовальное сертеательное общественной выпусков общественной выстроительной выпусков общественной выстроительной выпусков общественной выпусков общественной выпусков общественной выпусков общественной выпусков общественной выпус
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCCGGGACCGCCTATCT---GCGCCGCCCGTGCCTCCGCCCATGGAACGCGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 180.8; DB 10; Length 2557; Pred. No. 9.5e-44; 0; Mismatches 442; Indels 13;
                   1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                1382
                                                                                                                                          1330
                                                                                                                                                                                                    1322
                                                                                                                                                                                                                                                                                                                                                                                     1210
                                                                                                                                                                                                                                                                                                                                                                                                                                               1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             605
```

밁

밁 Ş Š

Ś

망 Ş

1383

ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT 1426

Ş

Ś

Ş

Š

Ş

Search completed: September 13, Job time: 646.019 secs 2004, 04:59:41

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
1 1131.4 67.8
2 1117.4 67.0
3 910.4 54.5
4 800.2 47.9
                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                       Score
                                                                                                                                                                    Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             September 12, 2004, 21:42:25 ; Search time 3067.12 Seconds (without alignments)
16249.761 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27513289 seqs, 14931090276 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_esthum: *
em_estin: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_hum:
em_gss_pln:
em_gss_pln:
em_gss_pln:
em_gss_vrt:
em_gss_run:
em_gss_mus:
em_gss_mus:
em_gss_pro:
em_gss
                                                                                                                                                                Length DB ID
      1212
1212
1041
1212
      29
29
29
AY405135
AY405136
BM559087
AY405137
                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55026578
AY405135 Homo sapi
AY405136 Pan trogl
BM559087 AGENCOURT
AY405137 Mus muscu
                                                                                                                                                                    Description
```

;	.4 . UI	44	43	42	41	40	39	c 38	w	36	35	34	ω ω	32	31	30	c 29	28	27	26	25	24	c 23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	σ	ហ	
	207.2		12.	16.	221.6	39.	40.	42.	60.	64.	67.	.69	70.	J	282.2	85.	œ		97.	0		\vdash	20.		26.	ω N	28.	346.2	47.	49.	50.	88.	ယ		22	4		σ,	686		w	
	12.4	ņ		·	13.3	٠.	4.	.4	5	5	ა	٥,	σ,	٥,	ۍ	7.	7.	7.	7.	æ	8	9	9	9.	۰.	ø.	9	0	0		_	ω.	ω ·	4.	ທ •	'n	თ	ω.	۲	۲.	7.	
į	798	4	\vdash	ø	239	N	\vdash	4	9	9	\vdash	œ	0	σ	w	\vdash	0	w	Θ	w	9	0	9	N	7	7	7	N	u	N	ω	N	N	4	თ	4	ū	$^{\infty}$	Q,	\vdash	0	
,	14	13	13	13	10	12	12	13	9	14	13	10	12	IJ	13	13	28	14	29	13	13	13	Q	13	13	14	12	13	10	w	L U	ü	12	13	5	10	14	12	13	12	ω	
	73810	X85660	U38045	σ	F33	5552	542	4999	AI693529	8867	2814	4508	390	9327	1418	2566	3847	4690	5037	4985	649	U47602	14043	403	U39196	80	G76171	U30092	E6653	599664	87316	U44930	M09027	U26137	E75182	F18163	968	G33206	X348	BM717062	877	
	F738105 UI-M-HD	X856607 BX85660	U380453 6038612	.0965 UI-M-FC	34244 RC1-CT02	55527 6030273	34238 S15603 M	19997 BX34999	\$529 wd43f05.	8679 AGENCOUR	28147 60311	15086 60157619	19095 60336135)3273 A	.4180	25661 A	8477 H	16903 AI	0379 D	19854 61	64928 6037	76024 60384674)437 qa37a	10303 6030	1962 60351078	8017 UI-M	1716 60271791	28 6037333	55357 154293	664 DKFZp	13167 BX87316	19301 6037642	90273 505452	61379 6033742	51825 204047	81631 60180443	748965 UI-M-HJ	32068 60243246	X348736 BX3487	7062 UI-E-EJ	AL528778 AL528778	

ALIGNMENTS

TITLE	REFERENCE AUTHORS	JOURNAL	TITLE	AUTHORS	REFERENCE	SOURCE ORGANISM	ACCESSION VERSION KEYWORDS	RESULT 1 AY405135 LOCUS DEFINITION
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Direct Submission	2 (bases 1 to 1212) Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,	Science 302 (5652), 1960-1963 (2003) 14671302	Adams,M.D. and Cargill,M. Adams,M.D. and Cargill,M. Sand Cargi	Clark,A.G., Glanowski,S., Nhelson,R., Thomas,P., Kejariwal,A., Todd,M.A., Tanembaum,D.M., Civello,D.R., Lu,F., Murphy,B., Terriers S. Wang G. Zheng Y.H. White T.T. Spinsky,T.T.	LUKATYOTA; MERAZOA; CHOTGATA; CTRINATA; PUTELFOSCOMI; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1212)	Homo sapiens (human) Homo sapiens	genomic survey sequence. AY405135 AY405135.1 GI:39761109 GSS.	AY405135 1212 bp DNA linear GSS 16-DEC-2003 Homo sapiens FUT10 gene, VIRTUAL TRANSCRIPT, partial sequence,

```
멍
                       Ş
                                                          뫄
                                                                                   Š
                                                                                                                     망
                                                                                                                                            Ś
                                                                                                                                                                      문
                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                      ß
                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 1132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                            1043
                                                                                                                                                                                                                                                                                                                                                          500
   860
                                                            800
                                                                                       983
                                                                                                                     740
                                                                                                                                                 923
                                                                                                                                                                              680
                                                                                                                                                                                                            863
                                                                                                                                                                                                                                          620
                                                                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                                                    560
                                                                                                                                                                                                                                                                                                                                                                                        683
                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                               743
                                                                                                                                                                                                                                                                                                                                                                                                                                                   623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGTCATGGTTGAGCTGGGGAAGTTTGGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                          TITATAGGATCATTGCACAGTATAAGITTATCCTAGCITTTGAGAATGCAGITTGTGATG
                                                                                                                                    TACGAAACAAAGACCTCCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGCCT
                                                                                                                                                                                                GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                              TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                             TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATTGACCTTCAACAGGAAAAAGGAAAATGGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                               GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                          TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                  AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                             TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATTGACCTTCAACAGGAAAAGGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                    AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
<1...>1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="FUT10"
'locus_tag="HCM2123"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1131.4; DB 29; Lengt Pred. No. 3.2e-168; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                        1042
                               1102
                                                                                                                                                                                                                                           679
                                                                                                                                                                                                                                                                      862
                                                                                                                                                                                                                                                                                                                                  802
                                                                                                                                                                                                                                                                                                                                                                                           742
                                                                                                                                                                                                                                                                                                                                                                                                                         499
                                                                                                                                                                                                                                                                                                                                                                                                                                                    682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                             859
                                                                                                                                                   982
                                                                                                                                                                                                             922
                                                                                                                                                                                                                                                                                                    619
                                                                                                                                                                                                                                                                                                                                                             559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             442
    919
                                                                                                                        799
                                                                                                                                                                                 739
                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
AY405136
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                 Ş
                                         В
                                                                  δ
                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                      Query Match
Best Local Sin
Matches 1121;
                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            920
                  323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pan troglodytes FUT10 gene, VIRTUAL genomic survey sequence.
AY405136
AY405136.1 GI:39761110
                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryoča; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Pan.

1 (bases 1 to 1212)

Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
Perriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.,
Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                   Submitted (16-NOV-2003) Celera Genom:
Submitted (16-NOV-2003) Celera Genom:
Rockville, MD 20850, USA
This sequence was made by sequencing
them based on alignment.
                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 1212)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene trios
Science 302 (5652), 1960-1963 (2003)
14671302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pan troglodytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pan troglodytes (chimpanzee)
                                                                                                        h 67.0%;
Similarity 98.9%;
21; Conservative
 AGGTCATGGTTGAGCTGGGGAAGTATGAAAGGAAGNNNTNTAAAAGTTCCAGTTTGCAAG
                                                                  AGGTCATIGGTTGAGCTGGGGAAGTTTGAAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCCCCAGCATCACAGACTGCCTTCCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                     /organism="Pan troglodytes"
/mol_type="genomic DNA"
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                               /gene="FUT10"
/locus_tag="HCM2123"
                                                                                                      Score 1117.4; DB 21
Pred. No. 5e-166;
0; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                Genomics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA linear GSS, TRANSCRIPT, partial
                                                                                                                                      DB 29;
                                                                                                                                                                                                                                                                                                                    genomic
                                                                                                                                                                                                                                                                                                                                                45 West Gude Drive,
                                                                                                           Indels
                                                                                                                                      Length
```

16-DEC-2003 sequence,

1212

1342 1099 1282 1039 1222

and

1212 0

Gaps

0

139

```
1160
                                                                                                                                 1040
                                                                                                                                                                                                                                 1163
                                                                                                                                                                                                                                                                                                     1103
                                                                                                                                                                                                 980
                                                                                                                                                                                                                                                                   920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 443
                                                                                                                                                                                                                                                                                                                                                                                                                                       983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                        GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTCCCCGCTGACGGGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                       TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1395
                                                                                     CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                            TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1222
                                                                                                                                                                                                                                                                   GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                     ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                          ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTNNATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGACAGCTATGTTCGCAAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCACGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACCATCAACCGGACCTACCTGCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1212
                                                                                                                                 ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                 ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                       TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                   TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   502
                                                                                                                                 1099
                                                                                                                                                                 1282
                                                                                                                                                                                                                                                                                                                                                                     1102
                                                                                                                                                                                                                                                                                                                                                                                                                                       1042
                                                                                                                                                                                                   1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                 1342
                                                                                                                                                                                                                                                                   979
                                                                                                                                                                                                                                                                                                                                       919
                                                                                                                                                                                                                                                                                                                                                                                                        859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
                                                            Š
                                                                                                                              Ś
                                                                                                                                                                 片
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                     묽
                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                       맑
                               뮍
                                                                                                 В
                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local |
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 1005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                 301
                                                                                                                                                                                                   672
                                                                                                 241
                                                                                                                                                                   181
                                                                                                                                                                                                                                     121
                                                                 792
                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                       \vdash
```

δ

A 6

Š 멂 δÃ B Š 밁 Ś 밁 Ş B Š B Š 뮍 8 뮍

TGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGA

971

B.

```
492 TGCTTGTTTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM12264 row: k column: 01
High quality sequence stop: 645.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1041)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM559087 1041 bp mRNA linear EST 20-FEB-200:
AGENCOURT 6562690 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5551224
5', mRNA sequence.
BM559087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM559087.1 GI:18802381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGA
                       ACCATCAGACAGGGACAGCTATGTTCGCGAGGTGATGACTTACATCGAGGTCGATTCCTA
                                                                                               CCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTC
                                                                                                                                                                                                                                                                                                  CTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCTTGTTTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCT
                                                                                                                                                                                             CCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:906"
/db xref="taxon:906"
/clone="IMAGE:5551224"
/tissue_type="retinoblastoma"
/tissue_type="retinoblastoma"
/lab host="MHIOB (phage-resistant)"
/clone_lib="NIH_MGC_67"
/clone_lib="NIH_MGC_67"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT Average insert size 1.75 kb. Library constructed by Li Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 910.4; DB 12; Pred. No. 1.6e-133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 20-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dT
Life
420
                                                  911
                                                                                                  360
                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                     791
                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                       731
                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                       671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
AY405137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                  TITLE
JOURNAL
                                                                                                                         JOURNAL
PUBMED
                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutereosco, Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; l (bases 1 to 1212)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M.; Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
Direct Submission
Submitted (16-NOV-2003)
Rockville, MD 20850, USA
                                           2 (bases 1 to 1212)
Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,
Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B.,
Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.
                                                                                                                                                                                                                                                                                                                                   GSS.
                                                                                                                                   gene trios
Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                            AY405137

Mus musculus FUT10 gene,
genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                AY405137.1
                                                                                                                                                                                                                                                                                                                                                                 AY405137
                                                                                                                                                                        Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                           4671302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTITGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAGATGTGGATTTCCAGCTT 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCCACAGTGTTTGC-TTTCTCACCACTCC-GGACTCCACCTTT---GAGCTCTTTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGAAAAGGGCTTACCACCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATCGATGCA-TTTGAGTGTATGGTGTG-CACCAAGGTGTGGGCTAATATC-AGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTTCTGACAGCTCTCAGGGAAACGGAAAATGGGGAGGTCCAAGACGTC-AACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGACAGATTGTATGAGGCCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGAAAAGGGCTTACCACCCAAAAAATGGGAGGCAGAAAATACCCACCTGGAGTGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACATCGATGCATTTTGAATGTATGGTGTGCCACCAAGGGTGGGGCTAATATCAAGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTICIGACAGCICICAGGGAACGGAAATGGNGAGIGCAAGACGICAAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGACAGATTGTATGAGGGCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCC
                                                                                                                                                                                                                                                                                                                                                  GI:39761111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCACCACTCCGGGACTCCACCTTTTGAGCTCCTTTCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1041
                                                                                                                                                                                                                                                                                                                                                                                             1212 bp
, VIRTUAL
                  Celera
                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                  Genomics,
                                                                                                                                                                                                                                                                                                                                                                                             DNA I:
TRANSCRIPT,
                45
                                                                                                                                                                                                                                                                                                                                                                                           linear GSS 16-DEC-2003
T, partial sequence,
                  Gude
                                                                                           Kejariwal, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                          B
                                                        8
                                                                                           뫄
                                                                                                                 Ş
                                                                                                                                                8
                                                                                                                                                                             8
                                                                                                                                                                                                            g
B
                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
   1103
                                                                                                                                                                                                                      680
                                                                                                                           983
                                                                                                                                                         740
                                                                                                                                                                                                                                                    863
                                                                                                                                                                                                                                                                                                                  803
                                                                                                                                                                                                                                                                                                                                                  560
                                                                                                                                                                                                                                                                                                                                                                                                              500
                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            263 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGTAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
   GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                 ATTACATCACAGAGAAGTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTGTATTATG
                                                   ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCCTGTATATTACG
                                                                                              TCTACAGAGTCATTGCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTCTGTGACG
                                                                                                                  TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                            TACAGAACAGAGATCTTCCTCAGCAGCTGAAAAACCCCGCCTCCATGGATGCTGATGCTT
                                                                                                                                                                                        TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                        GGGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTT
                                                                                                                                                                                                                                            GGGACAGCTATGTTCGCGGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                    TAAGACAAAAACTGGCCCCATTGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACA
                                                                                                                                                                                                                                                                                                          TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                  AAGGCGTGGACGTCCTGAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACC
                                                                                                                                                                                                                                                                                                                                                                       AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                              TCAACCATACGGCCACGTTCAGCAGGCATTCCCACTTGCCACTGACTACGCAGTACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                              TCCATGAAGAGTCCCCCAAAAACAATTATAAGCTCTTCCATAAACCAGTCATCACCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCATCATGACTGGGCGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTACCATCAACAGGACCTTCCAGCATCATCCGATGACCAGGGCCTTCCTATTCTACGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACTGGCCTTGGCTGGGAGGACCAAGGTGGATGCTGGTAGCTACCCCATCGTGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATTGACCTTCAACAGGAAAAGGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACGGACATAGAGATGTGGAGGGAGAGCCTAAACACCTTGGAGCCATTTCCTGAAAAAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTAGTGGTTGAGCTTGGGAAATTTGAAAGGAAGAAGATTAAAGACTCCAATGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence was made by sequencing based on alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
/moi_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="FUT10"
/locus_tag="HCM2123"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     47.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 800.2; DB 29; Pred. No. 2.6e-116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exons
```

562

319 502 259 442 199

382 139

1042

799

739 922 679 862 619 802 559 742 499 682 439 622 379

919

```
COMMENT
This them
       and
     ordering
```

0; Gaps 0

OY OY	Query M Best Lo Matches	ORIGIN	901108	FEATURES			AUTHORS TITLE JOURNAL COMMENT	REFERENCE	VERSION KEYWORDS SOURCE ORGANISM	LOCUS DEFINITION			Db Qy	Qy Db	Db Qy	סט
259 AAAGAGGICATĞGITGAGCIGGGAAGTITGAAAGGAAGGAGTITAAAAGTICCAGITTG 318	Query Match 47.6%; Score 794; DB 9; Length 1201; Best Local Similarity 96.8%; Pred. No. 2.5e-115; Matches 813; Conservative 7; Mismatches 18; Indels 2; Gaps 1;	/CLOHE LIDE NOME SAPIEMS NEWSCOME COLD OF NOW CHILD (ADDITION OF THE COLD OF COLD OF THE C	/organism= /mol_type= /db_xref="CS /clone="CS /tissue_ty	cgi-bin/clus Feng Liang E http://fulll Faraday Aven	თ ;	Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - France Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr Library was constructed by Life Technologies, a division of		Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 1201)	AL528778.2 (EST. Homo sapiens	~		1343 TIGAGIGIANGGIGIGGACCAAGGIGIGGGCIAATAICAGGCIICAGGAAAAG 1395	1283 CTCTCAGGGAACGGAAATGGGGAGTGCAAGACCAGGACAATTACATCGATGCAT 1342	1223 ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1282	1163 TITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1222	
JOURNAL MEDLINE PUBMED COMMENT	REFERENCE AUTHORS TITLE	VERSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 6 BM717062 LOCUS DEFINITION	da Qy	Db Qy :	D Qy	עס	Qy db	Οy	ОУ	D Qy	Db .	d dd	5 B &	? B ,	Q D
Genome Res. 6 (9), 791-806 (1996) 97044477 8889548 Contact: Soares, MB Coordinated Laboratory for Computational Genomics University of Iowa	Mammalia, Eutheria, Primates, Catarrhini, Hominidae, lases 1 to 712) Bonaldo, M.F., Lennon, G. and Soares, M.B. Normalization and subtraction: two approaches to faching overw	ENTITO 2.1 GI:19030320 EST. EST. Homo sapiens (human) Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E	BM717062 9 UI-E-EJO-ahk-e-07-0-UI.r2 UI-E-EJO Homo sapiens cDNA clone UI-E-EJO-ahk-e-07-0-UI 5', mRNA sequence.	1039 GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT 1098 	979 GGCTTTATAGGATCATTGCACAGIATAAGTTTATCCTAGCTTTTGAGAAIGCAGITTGT 1038 :	919 TGTTTACGAAACAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT 978 	859 GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA 918 	799 AAGCITAGAAAAAAGACTIGCTCCGCIGGIGIATAIGIACAGICAGACIGIGACCCACCACCATCA 858	739 TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAC 798 	679 TTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTACTACCCAATAC 738	619 GTTTTTCATGAAGAGTCCCCGAAAAACAAITATAAGCTCTTTCATAAACCAGTGATTACC 678	559 GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCT 618	47 TTCTTCACCATCAACCGGACCTACCTCCATCATCACACAAGCAATCCTCTCTAT	35 IGGIGGICCCCCCIGNCGSGSASACIGGSAGGIASGCCAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICGCACAAIICCTTCTTCTAT		367 CAAGATGGACATACAAAAATGGAAGGAAGCACCTACGCATTTTAATTCATTTCTTAAGAAA 426 379 GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC 438

```
Ś
                                                                                                 밁
                                                                                                                                        Ś
                                                                                                                                                                                                뮹
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                            B,
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                 301
                                                                                                                                               967
                                                                                                                                                                                                241
                                                                                                                                                                                                                                              907
                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                             847
                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                       787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      706;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: bento-soares@uiowa.edu
Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iow
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genetics (www.resgen.com).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 375 Newton Road,
Tel: 319 335 8250
Fax: 319 335 9565
                                      AATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTA 1086
                                                                                                                                                                                                                                                                                             GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
                                                                                                                                                                                                                                                                                                                      GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
                                                                                                                                                                                                                               TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCCACTTGCCACTA
                                                                                                 ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG
                                                                                                                                             ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG
                                                                                                                                                                                              TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAAATCCAGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                         ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   primer: M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /dev stage="fetal and adult"
//dev stage="fetal and adult"
//lab host="DH10B (life Technologies) (Tl phage resistant)"
//clone lib="UI-E-EJO"
//clone lib="UI-E-EJO"
//note="Torgan: eye; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I;
UI-E-EJO is a subtracted CDNA library constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded CDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tags for this library are: fetal eyes, AGAATCAAGA; lens, CGATTACCGA; eye anterior segment, AATGCCGAT; optic nerve, CCATTAACTG; retina, CCGCG; Retina Foveal and Macular, GTCC; RPE and Choroid, ACCTA. This library was created for the program, Gene Discovery in the Visual System, supported by National Eye Institute (NEI)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Choroid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="UI-E-EJ0-ahk-e-07-0-UI"
/tissue_type="fetal eyes, lens, eye anterior segment,
optic nerve, retina, Retina Foveal and Macular, RPE a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41.6%;
99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 694.4; DB 12;
Pred. No. 1.5e-99;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEBRF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            City,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IA 52242,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               y of loward of loward of lower
     420
                                                                                                 360
                                                                                                                                             1026
                                                                                                                                                                                              300
                                                                                                                                                                                                                                            966
                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                           906
                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                       846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
Ş
                                              밁
                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
BX348736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                             Query Match
Best Local S
Matches 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization

Full-length cDNA cope

Genoscope - Centre National de Sequencage

BP 191 9106 EVNX cedex - France

Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr

Library was constructed by Life Technologies, a division of

Invitrogen. This sequence belongs to sequence cluster 4610.r For

more information about this cluster, see

http://www.genoscope.cns.fr/

cgi-bin/cluster.cgi?seq=CSOBAG009ZG08_CS00831_1&cluster=4610.r.

Contact: Feng Liang Email: fliangelifecech.com URL:

http://fulllength.invitrogen.com/ InVitroGen Corporation 1600

Faraday Avenue Genoscope sequence ID: CSOBAG009ZG08_CS00831_1.

Location/Qualifiers
     1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA clone (
BX348736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 960)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BX348736 Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED CDNA Clone CSODD001YG24 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX348736.1
                                                                                                                                                                    Similarity
     CAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAG
                                                                                       CCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCA
                                                   CCCTAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATTACATCGATGCATTTGAGTGTATGGTGTGCA-CANGGTGTGGGCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGGCTA 1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC 1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTGATGACAGATTGTATGAGGCCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens (human)
                                                                                                                                             Conservative
                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db xref="taxon:9606"
/db xref="taxon:9606"
/clone="CSODD001YG24"
/tissue type="NEUROBLASTOMA COT 50-NORMALIZED"
/clone=Tib="Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED"
/note="Ist strand CDNA was primed with a NotI-oligo(dT)
primer. Flve prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
                                                                                                                                                               41.18;
                                                                                                                                          Score 686; DB 13;
Pred. No. 2.5e-98;
0; Mismatches 5;
                                                                                                                                                                                        Length 960;
```

Gaps

1059

9

EST 05-MAY-2003 ED Homo sapiens

708

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
               FEATURES
                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1060
                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Crani
Mammalia; Eutheria; Primates; Catar
1 (bases 1 to 687)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mamm
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     367
                                                                                                                                                                                                                                                                                                                                                                                                                                                 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67
            found through the I.M.A.G.E. Consor-
http://image.llnl.gov
Plate: LLCM1242 row: d column: 18
High quality sequence stop: 635.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                            BG332068 687 bp r 602432466F1 NIH_MGC_18 Homo sapiens mRNA sequence.
                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                  BG332068.1 GI:13138506
                                                                                                                                                                                                                                                                                       Homo
                                                                                   CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Consortium Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGGCCTAGTATTCAAGGACTGATTTCAAAAATGATCAGAATGAA 1645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCCAGCTTTGAACAATCCAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTTCTCACCACTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAA 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCAGCATCACA 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGGCCTAGTATTCAAGGACTGATTT-AAAAATGATCAGAATGAA 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCCAAAAGATGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAA 1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGCAAGTTATATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAA 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCAGCATCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCCAGCTTTGAACAATCCAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGACGCATTTGAGTGTATGGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGC 1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTGTCAGGGAACGGAAA
                                                                                                                                                                                                                                                                                       sapiens (human)
                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                      Consortium/LLNL
                                                                                                                                                                                                    Mammalian
                                                                                                                                                                                                                                                                                                                                                           mRNA linear EST 27-FEB-2001 s cDNA clone IMAGE:4549985 5',
                                                                                                                                                                                                    Gene
                                                                                                                                                                                                    Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           366
RESULT 9
CF748965
LOCUS
                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                               Ś
                                                                                                                              밁
                                                                                                                                                                                   B
                                                                                                                                                                                                             8
                                                                                                                                                                                                                                         멼
                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 654; Conserv
                                                                                                                                                                                                                                                                                                                                1101
                                                                                                                                                                                                                                                                                                                                                                                      1041
                                                                                                                                                                                                                 1221
                                                                                                                                                                                      540
                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
 CF748965
```

```
GACAGCTCTCAGGG--AACGGAAATGGGGAGTGCAAGACG--TCAACCAGGACAA--TTA 1331
                                                                                                                                                                                                                                                              GTATGAGGCCTATGTAGAATGGAAGCTGA-AGGGTGAGATCTCTAACCAGCGA--CTTCT 1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTTATAGGATCATTGCACAGTATAAGTTTTATCCTAGCTTTTGAGAAATGCAGTTTTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCCAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCGGATGCATTCGAGTGTATGGTG
                                                     CATCGATGCATTTGAGTGTATGGTG
                                                                                                                                                                                                                                                                                                                                                                                ATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACAGCTCTCAGGGCAACGGAACATGGGGGAGTGCAAGACGGTCAAACCAGGACAAATTAC
                                                                                                                                                                                                                             GTATGAGGCCTATGTAGAATGGAAGCTGACCGGGTGAGATCTCTAACCAGCGACTCTCTG
                                                                                                                                                                                                                                                                                                                                         ATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGA 1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTTTATAGGATCATAGCACAGTATAAGTTTATCCTAGC-TTTGAGAATGCAGTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTACGAAACAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTACGAAACAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:4549985"
/tlssue_type="large_cell_carcinoma"
/tlssue_type="large_cell_carcinoma"
/lab_host="D110B (phage-resistant)"
/clone_lib="WIH_MGC_18"
/clone_lib="WIH_MGC_18"
/note="Organ: lung; Vector: pOTB7; Site_1: XhoI; Site_2:
ECCRI; CDNA made by oligo-dT priming. Directionally cloned
into EccRI/XhoI sites using the following 5: adaptor:
GGCACGAG(G). Library constructed by Ling Hong in the
laboratory of Gerald M. Rubin (University of California,
Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
Superscript II RT (Life Technologies). Note: this is a
NIH_MGC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>۰</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 561; DB 12;
Pred. No. 1.3e-78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
684
                                                        1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                  1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1040
                                                                                                                 659
                                                                                                                                                                                                                                                                                                                                            539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      920
```

751

ď

mRNA

linear

10-OCT-2003

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                1156
                                                                                                                                                                                                                                      1096
1216 AGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  544;
                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                              976
                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                          μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. James Lin University of Iowa

CDNA Library preparation: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

DNA Sequencing by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Distribution information can be found at

http://genome.ulowa.edu/distribution/mousefl.html

This clone was contributed by the Brain Molecular Anatomy Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UI-M-HJ0-cmj-a-17-0-UI.r1 NIH BMAP HJ0 Mus musculus cDNA clone
IMAGE:30631600 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CF748965
CF748965.1 GI:37645310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: pYX-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BMAP)
                                                                                                                                                                                                                                                                                                                                                                                                                              GATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAAATGCAGTT 1035
                                                                                                                                TCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGAC 1215
                                                                                                                                                                                  TATTACGGATCCCCACCATCGCCGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTG
                                                                                                                                                                                                                                TATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTA 1155
                                                                                                                                                                                                                                                                                                                                         TGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTA 1095
                                                                                                                                                                                                                                                                                                                                                                                             GATGCTTTCTACAGAGTCATTGCCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTC
                                                                               TCGGAATTCTCTCACCCCAGAGAGCTGGCGAGCTTCATTAGGAGACTGGATTATGACGAT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 751)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="Upper Head"
/dev stage="9.5 and 10.5 dpc"
/lab_host="DHIOB (TI phage resistant)"
/clone_lib="NHIDB (TI phage resistant)
/clone_lib="NHIDB (TI phage resistant)
/clone_lib="NHIDB (TI phage resistant)
/clone_lib="NHIDB (TI phage resistant)
/clone resistant containing a Not I site .Double strand coDNA was
/size selected according to mENA size fraction ,ligated
with EcoR I adaptor , digested with NotI and then cloned
/cirectionally into pYX-Asc vector . The library tag
/sequence_located between the Not I site and the polyA tail
/is CGAACTGAAT. This library was created for the University
/lowa Brain Anatomy Project (BMAP): 'Gene Discovery in the
/beveloping Mouse Nervous System', supported by National
/Institute of Mental Health (NIMH)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
/clone="IMAGE:30631600"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mol_type="mRNA"
strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26.9%;
79.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 448.8; DB 14;
Pred. No. 4.7e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                              1275
                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
BF181631
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 GGGTTGTATGAGACCTATGTAGAGTGGAAGCTAAAGGGCAAGATCTCTAACCAGCGGCTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphreys

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC Clone distribution information can be

found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Muri 1 (bases 1 to 945)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BF181631 NCI_CGAP_Mam5 Mus musculus cDNA clone IMAGE:4035584 5',
                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM9309 row: k column:
High quality sequence stop: 645.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF181631.1 GI:11059773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
BF181631
                                                                                                                                                                                                                                                                                                                                                                                                                                              http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTTTGCTCACCAC-----TCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATG 1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGTACTAGACTGACAGAGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAATGATCAGAATGAAACAGAAA 1652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGAATCAAAATTTTTCATCTGAAGAGTTCTGGGCTCTAGTATTTAAGGACTAATTTANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGATTTCAA 1629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGCTACCTAGCTTCCAACAGTCTAAAAAAGAAGCCCCAGGCACTGAGGTGGCTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGATTTCCAGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGAT 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGTTCACCTTCTCATCTCCAGCTTCTCCGGCCCTACGTGGGAGATCGTTGCGAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCTTACCACCCAAACAATGGAAGGCAGATGTTAGCCACCTGCATTGCCCGGAGCCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACA 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACTCGTTTGAGTGTATGGTGTGCCGCAGGGTGTGGGCAAACAGTAGGCTGCAGGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATC 1335
                                                                                                                                                                                                        /organism="Mus musculus"
/mol type="mRNA"
/strain="C57BL/6J"
/db xref="taxon:10090"
/clone="IMAGE:4035584"
/clone_lib="NCI_CGAP_Mam5"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site 1: Sa
Site_2: NotI; Cloned unidirectionally. Primer: Ōligo
Library constructed by Life Technologies. Investigator
providing samples: Lothar Hennighausen/Robin Humphreys
                                                                                                                              /tissue_type="tumor, gross tissue"
/dev_stage="7 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                     9
```

Murinae; Mus

600

660

540

480

420

360

망 Ş В Ş 밁 Ś 뮍 Ş

Investigators

Sali; go dī.

Humphreys,

```
RESULT 11
BE751825
LOCUS
DEFINITION
ACCESSION
                                                      REFERENCE
AUTHORS
                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                              日
                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 560
                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1119
                                                                                                                                                                                                                                                                                                                                                                                                                                   1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1239
                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                       BE751825
204047 MARC 2BOV Bos tau:
BE751825
BE751825.1 GI:10165817
EST.
                                                                                                                                                                                                                                                                                                                               657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cch 26.6%; al Similarity 81.9%; 560; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,,,</u>
1 (bases 1 to 562)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., S
Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C.,
Bennett, G.L., Heaton, M.F., Laegreid, W.W., Rohrer, G.A.,
Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S.,
                                                                                   Bos taurus
Eukaryota; Metazoa; Chc
Mammalia; Eutheria; Cet
Bovidae; Bovinae; Bos
                                                                                                                                                           Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                            CACCAAGGTGTGGGCTAATATCAG 1382
                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGA 1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAA 1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTCAGCAGGCATTCCCACTTGCCACTGACTACGCAGTACCTGGAAGGCGTGGACGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCAGCAGGCATTCCCCACTTGCCACTAACTACCCAATACTTGGAGAGACATTGAAGTCCT
                                                                                                                                                                                                                                                                                                                               GCCGCAGGTGTGGGCAAACAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGAAGCTAAAGGGCAAGATCTCTAACCAGCG-GTTCTGACAG-TCTCAATGAACGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGGCGAACTTCATTAGGAGACTGGATTATGACGATGGGTTGTATGAGACCTATGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTATCGGAATTCTCTCACCCCAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       АСАСТСССТТССААСТААСЛАЛАСТСТАТТСТТСТАТСАСААТТТТСТСАССССАССА 1178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTGTATTATGGATCCCCCACCATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTCTGTGACGATTACATCACAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTCAGCAGCTGAAAAACCCCCGCCTCCATGGATGCTGATGCTTTCTACAGAGTCATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTTTACAGAACAGAGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACCTAAGACAAAAAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                    GTGGGGTGTGCAGGACATTAACCAGGACAA-TACATTGACTCGTTTGAGTGTATTGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - CCCATGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACAGGGACAGCTATGTCCG
                                                                                                                                                                                                                        562 bp mRNA linear Bos taurus cDNA 5', mRNA sequence.
                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 444; DB 10;
Pred. No. 2.2e-60;
0; Mismatches 120;
                                                                                                                                                                                                                                                                                                                               680
                              , Roberts, A.J., St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                            EST 25-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                  656
                                                                                                                                                                                                                                                                                                                                                                                                                                   1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         758
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                           Š
                                                                                               5
                                                                                                                                         망
                                                                                                                                                                    ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                1128
                                                                                                      1368
                                                                                                                                                                                                                                          1248
                                                                                                                                                                                                                                                                                                             1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1008
                                                                      421
                                                                                                                                         361
                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Quackenbush, J. and Keele, J.W.
Sequence evaluation of four pooled-tissue normalized bovine libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
21180013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and -minmato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called
v0.980904.e. Vector identified by cro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BACKWARD: GTTTTCCCAGTCACGACG
Plate: 44 row: G column: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4356
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                          TCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGGCAAG
                                                                                             GTGGGCTAATATCAGGCTTCAGGAAAAAGGGCTTACCACCCAAAAAGATGGGAGGCAGAAGA
                                                                                                                                                           GCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGT
                                                                                                                                                                                                                                                                                                             TTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTCTGAAGCTGGGGTCGTCCCTGTGTATTACGGATCCCCAGCATCGCAGACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAA
                                    TACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACC 1487
                                                                        CTACATCAGAGCGCTGGATCGGGATGACAGACGCTACCAGGCCTACATAGAATGGAAGCT
                                                                                                                                                                                                                                                                                                                                               TCCAAGCAATAGAAGTGCTATTCTGGTATCAGAATTTTCTCACCCTAGAGAGCTGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTATCCTTGCTTTTGAGAATGCGGTGTGCGACGACTACATCACTGAGAAGCTCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTGAGCAACCCGGCCTCGATGGACGCCGATGGCTTTTTCAGGATCCTCGCCCAGTATAA
                                                                                                                                       GCAGGACGTTAAGCAGGACAACTACATCGATGCGTTTGAGTGTATGGTGTGCACCAAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               te: 44 row: G column: 22 primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="MARC 2BOV"
/note="Vector: pCMV SPORT6; Site 1: Not1; Site 2: Sall;
Library made from pooled tissue from testis, thymus,
semitendonosus muscle, longissimus muscle, pancreas,
adrenal, and endometrium."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'tissue_type="pooled"
'lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lib="MARC 2BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 422.6; DB 10; Pred. No. 7.5e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 led and alt trimmed with phred
cross_match with the -minscore 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79;
```

Indels Length

ω ••

Gaps

1007

1427

480

537

1367

360

420

1307

300

1247

1187 180 1127 120 1067 60

```
Ś
                                              В
                                                                                    8
                                                                                                                                       В
                                                                                                                                                                            Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
BU261379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 588; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1468
                                                                                                                                                                                      766
                                              63
                                                                                                                                       ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Boardman, P.E., Sanz-Ezquerro, J., Overton, I.M., Burt, D.W., Bosch, E., Fong, W.T., Tickle, C., Brown, W.R.A., Wilson, S.A. and Hubbard, S.J. A Comprehensive Collection of Chicken cDNAs Curr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Simon Hubbard
Department of Biomolecular Sciences
University of Manchester Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BU261379 849
603374248F1 CSEQCHN51 Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PO Box 88, Manchester,
Tel: 01612008930
Fax: 01612360409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus gallus (chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2445392
    GTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGGACAGCTATGTTCGCGAGCTG
                                                                                                                                                                                 crccearaccraerrecrtrecaerccaaaaacaaecrraeaaaaaaacrrecrecre
                                                                                                                                          CTGAGACATATGATCCCAGTGCAGATGAAGAACAGCCTGAGGAAGCGGCTTGCACCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTGAGCTCTTTGCGAGAGATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 849)
                                                                                                                                                                                                                               24.9%;
llarity 70.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                     /clone_lib="CSEQCHN51"
//clone="Organ: limbs; Vector: pBluescript II KS(+); Site_1:
//core="Organ: limbs; Vector: pBluescript II KS(+); Site_2: cDNA
synthesis was initiated using an oligo(dT) primer, using
methylated C in the first strand synthesis reaction.
//core methylated C in the first strand synthesis reaction.
//core methylated C in the first strand reaction, double-stranded cDNA
was blunted, ligated to NotI adapters, digested with
//core ligated to NotI adapters, double-stranded conA
//core ligated to NotI adapters, double-stranded conA
//core ligated to NotI adapters, double-stranded conA
//core ligated to 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Simon.Hubbard@umist.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="22"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="White Leghorn, Hisex"
/db xref="taxon:9031"
/clone="ChEST286012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Gallus gallus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biomolecular Sciences
                                                                                                                                                                                                                               Score 415.2; DB 13; Length Pred. No. 7.9e-56; O; Mismatches 248; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp π
gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           덪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       e
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA linear EST 26-
s cDNA clone ChEST286o12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Science and
                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                 Gaps
                                                                                              885
                                                                                                                                          62
                                                122
                        JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
BM090273
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                                                                              BM090273 523 bp
505452 MARC 3BOV Bos taurus cDNA
BM090273.1 GI:17000901
EST.
    Contact: Smith TPL USDA, ARS, US Meat
                                                                                                                                                                                                                                                                                                                                                                       Bos taurus (cow)
    Animal
       Research
```

```
1546 CAGGCACTAAGGTGGCTGGTTGATAGGAATCTAAAACTTTTCATCTCAAGAGTTTTTGGGGC
780 TGGGCGCTGAGGCAGCTGGTGGAAAGGAA-CAGGAATTTACAACTCAAGAATTTGGATGC
                                                                                                                          GTTAACCATCTGAACTGCCCAAACCTGAGGCTTTCTGGGTTCTCCTC---TTCAAATCCC 719
                                                                                                                                                                                                                                                                                                              GATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCA 1485
                                                                                                                                                                                                                                                                                                                                                                             GTGTGGGAAAACATCAGAAGAAGAAAAAGGGATGGCTGCCCCAGAGGTGGAGTGCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAAGGCAGAA 1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCAAGATGTCACTCAGGACAATTATATTGACACATTTGAGTGCATGGTGTGAACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAG 1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGAAAGGAGACATTTCCAATCCAAGGCTGCTTACAGCAATGAAGGAACGCAAATGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGGAAATGGGGA 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCTATATCAAAACACTGGATCAAAATGACCAGGAGTATGAGGCCTACCTGGAATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAG 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCCCAGCAACAAGAGTGCAATCTTGGTATCTAGTTTTCACACCCTCGAGAGCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCCAGGGAACTGGCA 1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCCTCTGATGCTGGGAGTGGTACCTGTGTACTTTGGTTCTCCCAGCATTATCGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGCCACTGAAACTGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGTTCATTCTTGCTTTTGAAAATGCTATCTGTGAAGATTATATCACTGAAAAAACTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGG 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCTCAGAAATCCATCTGCCATGGATGATGGGAACTTCTATAAAATACTGGCACAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCIGAAAATCCAGCCICIAIGGAIGCCGAIGGCITITAIAGGAICAITGCACAGIAI 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1605
                                                                                                                                                                                          1545
                                                                                                                                                                                                                                                                                                                                                                                662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                              779
```

5', mRNA sequence

mRNA

19-NOV-2001

Elikaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bos.

1 (bases 1 to 52)

Smith, T.P.L., Grosse, M.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Wray, J.E., Mhite, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Haeton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and Keele, J.W.

Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle genome Res. 11 (4), 626-630 (2001)

Center

```
RESULT 14
BU449301
LOCUS
                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 448;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1126
                                                                                                                                                                                                                                                                                                                                                                                         1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1066
                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                           418
                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PO Box 166, cr., -
Tel: 402 762 4366
Fax: 402 762 4390
Email: smithbemail.marc.usda.gov
Single pass sequencing. Bases called and alt trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
sequence.
BU449301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
                                      BU449301 728 bp n 603764226F1 CSEQRBN13 Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BACKWARD: GTTTTCCCAGTCACGACG
Plate: 97 row: E column: 4
Seq primer: ATTTAGGTCACACTATAG.
                                                                                                                                                                                                       CAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTTCATCTC 1591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCA 1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACCTCTGAAGCTGGGGGGCGTCCCTGTGTATTACGGATCCCCCAGCATCGCAGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGG 1125
                                                                                                                                                                                                                                                                                                    GTTACCCACCTGAGCTGTCCAGAGCCTACAGTGTTCGCTTTCTCACC----CCTGGTCCCA
                                                                                                                                                                                                                                                                                                                                                                                  GATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCA 1485
                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAA 142:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGCAGGACGTTAAGCAGGACAACTACATCGACGCGTTTGAGTGTATGGTGTGCACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGAAGGGCGAGATCTCGAATCAGCGACTTCTCACCGCACTCAGGGAACGGAAGTGGGGG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGA 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTACATCAGAGCGCTGGATCGGGATGACAGACGCTACCAGGCCTACATAGAATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAG 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCCAAGCAATAGAAGTGCTATCTTGGTATCAGAATTTTCTCACCCTAGAGAGCTGGCG 120
                                                                                                                                                                         CGGGCACTCAGGTGGCTGGTCGATAGGAATCAAAACTTTTCAACTC 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="MARC 3BOV"
/note="Vector; pCMV SPORT6; Site 1: NotI; Site 2: SalI;
Library made from pooled tissue from marrow, alveolar
macrophage, ovary, fetal semitendonosus muscle, and fetal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 390; DB 12; Length 5
Pred. No. 1e-51;
0; Mismatches 75; Indels
                                         cDNA clone ChEST687d8 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 523;
                                                           linear
                                                                EST 29-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fetal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲;
```

. B S 밁 Ş β Ş 맑 Ś B S 밁 Ş В

Ş 뭐 Ş

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                    B
                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                 Ś
                               Ś
                                                                                                                                Ś
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                      695
                                                                                                                                                                                                                                                                                                                                                                                               635 CCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTG
                                                                                                                                                                                                                            755
                                                                                                                                                                                                                                                                                                                                                                                                                                                           529;
                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (chicken)
Gallus gallus
Gallus gallus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simon Hubbard
Department of Biomolecular Sciences
University of Manchester Institute of Science and Technology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 728)
Boardman, P. I., Sanz-Ezquerro, J., Overton, I.M., Burt, D.W., Bosch, Fong, W.T., Tickle, C., Brown, W.R.A., Wilson, S.A. and Hubbard, S.J. A Comprehensive Collection of Chicken cDNAs Curr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BU449301.1 GI:25938612
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 01612008930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PO Box 88, Manchester, M60 1QD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2445392
                               TTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAG
                                                                                                                                                                                                                                                                                                            CCACGTTCAGCAGGCATTCCCACTTGCCACTACTACCCCAATACTTGGAGAGCATTGAAG
                                                                                         TTGCACCACTTGTGTATGTGCAGTCTGACTGCAATGCTCCTTCTGACCGGGACAGCTATG
                                                                                                                    TTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATG
                                                                                                                                                                                 TCCTCAGGTCCTTGAGACATATGATCCCAGTGCAGATGAAGAACAGCCTGAGGAAGCGGC
                                                                                                                                                                                                                          тсстваластслегоставттсстттвелегоставлаласттавлалавае
                                                                                                                                                                                                                                                                                                                                                                  CACCAGAAAACCTACAAACTTTTCCATGAACCAGCTATCACCTTATTCAACCACACTG
TACGTGAGTTGATGTGCCACATTGAAGTAGACTCTTACGGAGAATGTCTGCATAACAGAG
                                                                                                                                                                                                                                                                          CAACTTTCAGCCGCCATTCTCACCTACCGCTGACCACTCAGTACCTTGAGAGCATAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ilarity 72.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01612360409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clome_lib="CSEQRBN13"
//note="Organ: Ovary; Vector: pBluescript II KS(+); Site_1:
ECORI: Site_2: Not1: This normalized library was
constructed from 1 million independent clones. cDNA
synthesis was initiated using an oligo(dT) primer, using
methylated C in the first strand synthesis reaction.
Following this first strand reaction, double-stranded cDNA
was blunted, ligated to NotI adapters, digested with
ECORI, Size-selected, and cloned into the NotI and ECORI
compatible sites of a custom modified MCS of the
pBluescript (KS+) vector. The library was normalized in 2
rounds using conditions adapted from Soares et al., PNAS
(1994) 91: 9228-9232 and Bonaldo et al., Genome Research 6
(1996): 791, except that a significantly longer
reannealing hybridization was used."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Simon.Hubbard@umist.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Gallus gallus"
/mol_type="mRNA"
/strain="Layer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dev_stage="adult"
|lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="ChEST687d8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 db_xref="taxon:9031"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ·.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 388.8; DB 13; Pred. No. 1.2e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 197; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                           934
                                                                                                                                     874
                                                                                                                                                                                   180
                                                                                                                                                                                                                            814
                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                      754
                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                694
300
                                                                                         240
```

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
BX873167
LOCUS
                                                                                                                                                                                                                                                                                               JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    935
                                                                                                                                                                                                                                   Contact: Guiguen Y
INRA - SCRIBE
Campus de beaulieu, I
Tel: 02.23.48.50.09
Fax: 02.23.48.50.20
                                                                                                                                                                                                                                                                                                      Govoroun, M., Guiguen, Y. and Le Gac, F. Construction and primary characterization of libraries in rainbow trout, Oncorhynchus myki Unpublished (2003)
                                                                                                                                                                                           Email: Yann.Guiguen@beaulieu.renmes.inra.fr
Sequence cleaned of vector, adaptator and repetitions. Contact us
at sigenasupport@jouy.inra.fr to obtain the chromatogram of this
                                                                                                                                                                                                                                                                                                                                                                                                                   EST.
Oncorhynchus mykiss (rainbow trout)
Oncorhynchus mykiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BX873167
839 bp mRNA linear EST 17-DEC-2003
BX873167 AGENAE Rainbow trout multi-tissues-normalized (tcbk)
Oncortynchus mykiss cDNA clone tcbk0017c.p.23 5prlm, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oncorhynchus mykiss cDNA
BX873167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX873167.1 GI:40001712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCAAATGGGGAGTGCAAGATGTCACTCAGGACAATCTATATCGACACATTTGAGTGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGAAATGGGGAGTGCAAGACGTCAACCAGGACAAT-TACATCGATGCATTTGAGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGAATGGAAACTGAACAGGAGACATTTCCAATCCAAGGCTGCTTACAGCAATGAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGAATGGAAGCTGAA-GGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATCGACTGGCTTCCCAGCAACAAGAGTGCAATCTTGGTATCTAGTTTTTCACACCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAAACTCTGGCGGCCTCTGATGCTGGGAGTGGTACCTGTGTACTTTGGTTCTCCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTTCCTCAGCATCTCAGAAATCCATCTGCCATGGATGATGGGAACTTCTATAAAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCA
                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 839)
                                                                                                                                                    primer: M13R
                                                                                                                                                                     0017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCCGCTATATCAAAACACTGGATCAAAATGACCAGGAGTATGAGGCCTACC
                         /clone="tcbk0017c.p.23"
/tlssue_type="mult!-tissues"
/dev_stage="from embryos to adults"
/lab_host="DH108"
                                                                                                                                       Location/Qualifiers
/clone_lib="AGENAE Rainbow trout multi-tissues-normalized
(tcbk)"
                                                                              /mol_type="mRNA"
/db_xref="taxon:8022"
                                                                                                           organism="Oncorhynchus mykiss"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             728
                                                                                                                                                                row: p
                                                                                                                                                                                                                                                                  RENNES
                                                                                                                                                                   column:
                                                                                                                                                                                                                                                                 cedex,
                                                                                                                                                                                                                                                                  35042,
                                                                                                                                                                                                                                                                                                                       mykiss
                                                                                                                                                                                                                                                                  France
                                                                                                                                                                                                                                                                                                                                    normalized
                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
             Search completed: September Job time: 3073.12 secs
                                                                                                                        밁
                                                                                                                                                S
                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                            á
                                                                                                                                                                              밁
                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1032
                                                                                                                                                                                                                                                                  1332
                                                                                                                                                                                 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                    786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
```

```
/note="Vector: pT7T3D-pac; Rainbow trout multi-tissues-normalized + 2 subtractions; Clone distribution: ACENAE Resource centre. François FIUMI, François.Piumi@jouy.inra.fr, INRA, CEA Radiobiologie et Etude du genome (LREG), Domaine de Vilvert, 78352, Jouy-en-Joase cedex, FRANCE, +33 (0) 1.34.65.28.02, +33 (0) 1.34.65.22.73"
```

21.0%; 65.0%;

Score 350.6;

DB 13;

Length

839;

852 ACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTA 732 CCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTC GACGGCCAGTTACGAGCAGTCCAAGNAAGAGGCTAGGGCATT GATTTCCAGCTTTGAACAATCCAAGAAAGAAGCCCCAGGCACT cacaçıcırıç
cacçaciç
cacçır
cacçır ALAGGGCCTTGTTCCTALAACCTGGCAAGCAGAGGGAAACCACCTAAAGTGTCCACTTCC AAAGGGCTTACCACCCAAAAAGATGGGAAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCC CATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGA GTTGGTAAAGGAGCTGAAGGAACGCCCATGGGGTGTCCAGGATCTGACACAGGAGAACTA ACTTCTGACAGCTCTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAACCAGGACAATTA CGACGAGGAGTATGCCACTTATCTGGAGTGGAAGTTGAAGCGTGAAGTCTCCAACCTGGA TGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCG 127 TGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA TGTGTATTACGGTGCTCCCAATGTTCGGCAATGGCTGCCGAGCAACAGTAGTGCGGTTGT TGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCT CGTCTGTGACGACTACATCACCGAGAAACTATGGAGGCCTCTCAAGCTTGGGGTGGTTCC AGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCC TGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGC TGGACAATGCCTCCACAACAAAGACCTGCCTTCCCATCTGAGGGACTCGATTGCCATGGA regreaarerraceaaacaaaeaccrecereaecaecreaaaaarecaeccrerareea TCCGTCGGACCGGGATGCCTATGTGAGTGAGTTAATGAAGCACATCAGGGTTGATTCCTA GAAGAACGAGCTGAGGAAAACACTAGCCCCGGTGGTACGTCCAGTCAGACTGCGACCC AGTCGACCCAGACGAGCCCCCTGAAAAACTGGCTCTGTATCTGAAGAGACTAGATGAGGA o ,, Pred. No. 1.1e-45;); Mismatches 285 -CTAGAAAGCGGACATCTTTGCGAGGAATTTG Indels 1553 ω --1511 1451 1391 1331 1211 1151 1091 1031 308 971 128 785 728 809 548 488 428 368 248 188 911 851 9

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein -
                                                                                                                                                                                                                                                                                                                                                                                  ŏ
    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                           2309
2119.5
2040
2034
1734.5
1586
1499
1115.5
                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPTREMBL 25:*

1: sp_archea:*

2: sp_bacteria:*

3: sp_fungi:*
                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-080-960-2
2625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1017041 segs, 315518202 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         September
                                                                                                                                                                                                                                                                                                                                                                                                    Query
  141.012.88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MKVTGPPQGVTDSMQCFNDQ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_unclassified:*
sp_rvirus:*
sp_rvirus:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_mhc:*
sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _archeap:*
    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2004,
                                                                                                                                                        11
13
                                                                                                                                                                                                                         11
13
QBTE43
QBIVI3
QBIVI7
QBIVI7
QBIVI6
QBIVI6
QBIVI6
QBIVI6
QBIVI6
QBIVE4
QB
                                                                                                                                                                                                                                                                                                                                                                               IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21:38:00
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          00; Search time 121 Seconds (without alignments) 1267.288 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .LVDRNQNFSSQEFWGLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1017041
                     Q8te43 homo sapien
Q7yre8 bos taurus
Q8ivi3 homo sapien
Q8ivi7 homo sapien
Q8ivi7 homo sapien
Q8ivi6 homo sapien
Q8ivi6 homo sapien
Q8ivi6 homo sapien
Q8r247 mus musculu
Q8awc7 gallus gall
Q8iye4 homo sapien
Q8bfc9 mus musculu
Q8cxe9 mus musculu
Q9cxe9 mus musculu
Q8cxe9 mus musculu
                                                                                                                                                                                                                                                                                                                                                                             Description
  Q8c457 mus
  sapien
musculu
```

44 245 45 244	249	N	2	2	255	255	2	258	259	261	2	264	266	274	275	275	N	278	25 282	N	2	285	21 285	N	2	290	
9.	51	51 9.	52 9.	54 9.	.5 9.	.5 9.	56 9.	5	.5 9.	10.	64 10.	.5	.5 10.	.5 10.	.5 10.	.5 10.	76 10.	.5 10.6	.5 10.	.5 10.	84 10.	.5 10.	.5 10.	.5 10.	90 11.	.5 11.	щ
374 (86	9	9	01	3	92	59	62	60	8	59	49	62	59	359 6	9	00	59	O)	<u>υ</u>	9	26	59	59	2	91	63
Q8HYJ4 Q8HYJ7	6 Q8HZR3	L3 Q98952	o		o	L3 Q9W641	o		o	L1 Q9R220	4 Q9UND8							11 088819	o			O		13 Q8UWC1	0	13 Q9W640	13 Q8UWC0
Q8hyj4 pongo pygma Q8hyj7 gorilla gor	bos tau	Q98952 gallus gall	g pongo p		caenor	_	Q8hyj6 gorilla gor	035886 cricetulus	u	Cri	Q9und8 homo sapien	xen	cricetul	_	sod	Q9y231 homo sapien	caen	O88819 mus musculu	p,	Q8uvz3 gallus gall		ÇO.	rattus	Q8uwc1 gallus gall	dictyos	C	Q8uwc0 xenopus lae

ALIGNMENTS

```
RESULT 1
Q8TE43
片
                                                                                                                                                                                                                                                                                                                                 SOUTH TO THE PROPERTY OF THE P
                                                                     Ś
                                                                                                                                                            Query Match
Best Local S
Matches 426
                                                                                                                                                                                                                                                                                                                                                                                          X MEDLINE=21671316; PubMed=11698403;
A ROOS C., Kolmer M., Mattila P., Renkonen R.;
A ROOS C., Kolmer M., Mattila P., Renkonen R.;
T "Composition of Drosophila melanogaster proteome involved in fucosylated glycan metabolism.";
I J. Biol. Chem. 277:3168-3175(2002).
ZMBH; AJ431184; CAD24023.1; -.
R Genew, HGNC:19234; FUTIO.
R GG:0016020; C:membrane; IEA.
R GO; GO:0016740; F:fucosyltransferase activity; IEA.
R GO; GO:0016740; F:transferase activity; IEA.
R GO; GO:0016740; Glyco_transf_10.
PFORM; PFORMS2; Glyco_transf_10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OSTE43 PRELIMINARY; PRT; 420 OSTE43; OLJUN-2002 (TrEMBLrel. 21, Created) OLJUN-2002 (TrEMBLrel. 21, Last sequence) OLOCT-2003 (TrEMBLrel. 25, Last annotate) Putative alpha 1,3-fucosyl transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                    Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                               59 MEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINR 118
                                                                                                                                                                                                       Similarity
    MEEAPTHENSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGOCGADACFFTINR
                                                                                                                                                                                                                                                                                                                                 428 AA; 50292 MW;
                                                                                                                                                                     Conservative
                                                                                                                                                                                                       99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update
                                                                                                                                                                1:
                                                                                                                                                            Score 2309; DB 4; Length 428; Pred. No. 3e-185; Indels
                                                                                                                                                                                                                                                                                                                                 DFA556F79A5940E8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij.
                                                                                                                                                                     0
                                                                                                                                                                Gaps
        60
```

393 370 453 429

```
PRESERVED OF SERVED SO SER
     片
                                       δ
                                                                                                           멍
                                                                                                                                                         Ş
                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Germot A., Dupuy F., Loriol C., Julien R., Maftah A., "Genomic organization and expression profile of putative fucosyltransferase genes, futl0 and futl1, in Bos taurus. Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases. EMBL, AY344579; AAQ02331.1; -. Glycosyltransferase; Transferase. SEQUENCE 462 AA; 53884 MW. APPARAMENTATION OF THE PROFILE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-2003 (TrEMBLrel. 25, Created)
01-OCT-2003 (TrEMBLrel. 25, Last sequence up
01-OCT-2003 (TrEMBLrel. 25, Last annotation
Putative alpha 1,3-fucosyltransferase.
FUT10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q7YRE8;
Q7YRE8;
01-OCT-2003
01-OCT-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovinae; Bos. NCBI TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Simhes 390;
                                                                                                              131
                                                                                                                                                                    154
        191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                    71
                                                                                                                                                                                                                                                                     94
                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                              34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
     LRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADG
                                                                                                                                                                                                                                                    WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAV
                                                                                                                                                                                                                                                                                                                           FHEES PKONNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLES I EVLKSLRYLVPLQSKNK
                                                                                                                                                                                                                    WSPLTGETGRLGQCGADACFFTINRTYLHHHRTKAFLFYGTDFSIDSLFLFRKAHHDWAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FHEESPKNNYKLFHQPVITLFNYTATFSRHSHLPLTTQYLEGTEVLTSLRHLVPLKSKNH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FWGLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EWKLKGEISNQRLLTAVRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPKRW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EWKLKGETSNORLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPKRW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RELMTY LEVDSYGECLRNKDLPQQLKNPASMDADGFYRI I AQYKFILAFENAVCDDYI TE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FWGLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITE
                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                                                                                                                                                                                                                                 80.7%; Score 2119.5;
86.1%; Pred. No. 2.66
:ive 25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    462
                                                                                                                                                                                                                                                                                                                                                                                                                                    les 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6,
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           alpha
.";
                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                    213
                                                        273
                                                                                                              190
                                                                                                                                                                                                                    130
                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULTI
CONTROL

ID
CONTROL

ACC
CONTROL

AC
                                                                    д
                                                                                                                    상
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (OCT-2002) to the EWBL/GenBank/DDBJ databa EMBL; AJ512465; CAD54669.1; -. GO, GO:0016020; C:membrane; IEA. GO; GO:0016740; F:transferase activity; IEA. GO; GO:00064817; F:transferase activity; IEA. GO; GO:0016740; F:transferase activity; IEA. GO; GO:0016740; F:transferase activity; IEA. GO; GO:0006486; F:protein amino acid glycosylation; InterPro; IFR001503; Glyco_transf_10. Pfan; FP00852; Glyco_transf_10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8IVJ3;
Q8IVJ3;
01-MAR-2003
01-MAR-2003
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Candelier J.J., Martinez-Duncker I., Candelier J.J., martinez-Duncker I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23, 01-JUN-2003 (TrEMBLrel. 24, Putative alpha 1,3-fucosyl t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning and genomic FUT10.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUT10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                           207
                                                                                                                                                                                                                                              214
                                                                                     267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                       154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         380;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  430
                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPLFRKAHHDWAV
                                                                                                                                                                                                                                                                                                                                                                                                                                         WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLFRKAHHDWAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKMGVQDVNQDNYIDA
                                                                                                                                                                                           LRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADG
                                                                                                                                                                                                                       LRKRLAPLVYVQSDCDPPSDRDSYVRBLMTYIEVDSYGBCLRNKDLPQQLKNPASMDADG
                                                                                                                                                                                                                                                                                                    FHEESPKNINYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNK
                                                                                                                                                                                                                                                                                                                                FHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FQQSKKEARALRWLVDRNQNFSTQEFWALVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEQSKKEAQALRWLVDRNQNFSSQEFWGLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FECMVCTKVWDNIRLQEKGLPPKRWQADVTHLSCPEPTVFAFSPL-VPRRRSLREMWIPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FECMVCTKVWANIRLQEKGLPPKRWEAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FSHPRELASYIRALDRDDRRYQAYIEWKLKGEISNQRLLTALRERKWGVQDVKQDNYIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  419 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48854 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77.7%;
97.2%;

    Created)
    Last sequence upon
    Last annotation of transferase.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2040; DB 4;
Pred. No. 1.1e-162;
2; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata;
Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6E17FF8315B553E5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oriol
a new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R., Mollicone R.; alpha3-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

326

```
RESULT OF RESULT
RESULT
QBKOS3
ID Q8
AC Q8
                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ᆬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                             Ş
                                                                                                                                                                                                        g
                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A Candeller J.J., Martinez-Duncker I., Oriol R., Mollicone R.;

Tricloning expression and genomic organization of two new human alph

Tricosyltransferases (FUT10 and FUT11) ";

L Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

R GG, GG:0016020; C:membrane; IEA.

R GG; GO:0016020; C:membrane; IEA.

R GG; GO:0006417; F:ftcosyltransferase activity; IEA.

R GG; GO:000646; F:protein amino acid glycosylation; IEA.

R GG; GO:000646; P:protein amino acid glycosylation; IEA.

R InterPro; IPR001503; Glyco transf_10.

R InterPro; IPR001503; Glyco transf_10.

R Transferase, Glycosyltransferase.

W Transferase, 391 AA; 45696 MW; 332C1B4FCDCA45C5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U1-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Putative alpha3-fucosyltransferase.
FUT10.
  Q8K0S3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8IVI7;
Q8IVI7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mar
Local o
379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     387
                                                                                                                                  361
                                                                                                                                                                         396
                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                          336
                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                               276
                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36 MVELGKFERKEFKSSSLODGHTKMEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                            HPRELASYIRRLDSDDRLYEAWYEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFE
                                                                                                                                                                                                                                                                                                                                      RIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFS
                                                                                                                                                                                                                                                                                                                                                                                                                   KRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLPRKAHHDWAVFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLFRKAHHDWAVFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MVELGKFERKEFKSSSLQDGHTKMEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FECMVCTKVWANIRLQEKVSKSKVGIEPAGW 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FECMVCTKVWANIRLQEK-----GLPPKRW 418
                                                                                                                                CMVCTKVWANIRLQEKVSKSKVGIEPAGW
                                                                                                                                                                      CMVCTKVWANIRLQEK-----GLPPKRW 418
                                                                                                                                                                                                                                                                                                         RIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFS
                                                                                                                                                                                                                                                                                                                                                                                          KRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FSHPRELASY I RRLDSDDRLYEAYVEWKLKGE I SNQRLL TALRERKWGVQDVNQDNY I DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.5%; ilarity 97.4%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                           PRELIMINARY;
                                                                                                                                                                                                                      JSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 2034;
Pred. No. 3.
                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Oriol R., Po
                           436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               391
                                                                                                                                  389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .1e-162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 391;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human alpha3-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IEA.
                                                                                                                                                                                                                                                              395
                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                     275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
```

```
RESULT
Q8AWB5
ID Q8A
AC Q8
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Strausberg R.;

I Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.

I Scolor (MAY-2002) to the EMBL/GenBank/DDBJ databases.

I GO; GO:0016020; Cimembrane; IEA.

I GO; GO:0016757; F:transferase activity, transferring glycos

I GO; GO:0016757; F:transferase activity, transferring glycos

I GO; GO:0016757; F:transferase activity, transferring glycos

I GO; GO:0016757; F:transferase activity, transferase;

I GO; GO:0016757; F:transferase;

I GO; GO:0016757;

I GO; GO:001675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 25, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Putative fucosyltransferase,
Putative fucosyltransferase,
Putative fucosyltransferase,
Mus musculus (Mouse).
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                 QBAWB5, PRELIMINARY; PRT; 439 AA.
QBAWB5, 01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Putative alpha3-fucosyltransferase.
FUT10.
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
     NCBI_TaxID=9031;
                                                                                                                                                                                                  Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                    Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [SSUE=Retina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 316;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34 EVMVELGKFERKEFKSSSLODGHTKMEEAPTHLNSFLKKEGLTFNRKKKWELDSYPIMLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRKRLAPLVYVQSDCDPPSDRDSYVRBLMTYIEVDSYGECLRNKDLPQQLKNPASMDADG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLFRKAHHDWAV 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FECMVCTKVWANIRLQEKGLPPKRWEAEDTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FYRVIAQYKFILAFENAVCDDYITEKTWRPLXLGVVPVYYGSPTIADWLPSNRSAILVSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FECMVCRRVWANSRLQEQ---VSEWKSGGWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LRQXLAPLVYVQSDCDPPSDRDSYVRELMAYIEVDSYGECLQNRDLPQQLKNPASMDADA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FHEESPKNINYKLFHKPVITLFNHTATFSRHSHLPLTTQYLEGVDVLKSLRYLVPLQAKNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WSPLTGETGRLGQCGADACFFTINRTFQHHPMTRAFLFYGTDFNIDSLPLPREAHHDWAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FSHPRELASFIRRLDYDDGLYETYVEWKLKGKISNORLLTALNEREWGVQDINQDNYIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66.1%;
80.8%;
                                                                                                                                                                                                        Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1734.5;
Pred. No. 4.9
                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; 
; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.9e-137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g glycosyl.
IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        436;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      u
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  206
```

```
RESULT 7

OBIVA

OBIVA

AC QBIV

DT 01-W

DT 01-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A Candeller J.J., Martinez-Duncker I., oriol R., Mollicone R.;

"Cloning expression and genomic organization of a new human alpha3
"I fucosyltransferase (FUTIO).";

I submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AJ535692; CAD59689.1; -.

EGG; GG:0016020; C:membrane; IEA.

EGG; GG:0018417; F:fucosyltransferase activity; IEA.

EGG; GO:0008417; F:transferase activity, transferring glycosyl...

EGG; GO:0016757; F:transferase activity, transferring glycosyl...

EGG; GO:0016757; F:transferase.

EGG; GO:0016757; F:protein amino acid glycosylation; IEA.

EGG; GO:0016750; Glyco transf. 10.

EGG; GO:0016750; Glyco transf. 10.
                                                                                                                                                                                                                                                                                                                                        U1-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Putative alpha3-fucosyltransferase.
FUTIO.
                                                                                                                                                                                                                                                                                                                                                                                                         Q8IVI6;
Q8IVI6;
01-MAR-2003
01-MAR-2003
01-JUN-2003
SEQUENCE FROM N.A.

Candeller J.J., Martinez-Duncker I., Oriol R., Candeller J.J., Martinez-Duncker I., Oriol R., "Cloning expression and genomic organization of fucosyltransferases (FUT10 and FUT11).";

Submitted (DEC-2002) to the EMBL/GenBank/DDBJ EMBL, AJ538839; CAD59772.1;

GO; GO:0016020; C:membrane; IEA.
                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted [2]
                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oriol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                  384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        293;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FSHPRELASYIRRLDSDDRLYBAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LRKRLAPLYYVQSDCDPPSDRDSYVRELMTY1EVDSYGECLRNKDLPQQLKNPASMDADG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FHEESPKNNYKLFHKPVITLFNYTATFSRHSHLFLTTQYLESIEVLKSLRYLVFLQSKNK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVITELGNSENKAPAVSSLHSGPLKPDERHA---SQLKKNELYSNFRTEPDTDHYPILLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EVMVELGKFERKEFKSSSLQDGHTKMEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FSHPRELARYIKTLDQNDQEYEAYLEWKLKGDISNPRLLTAMKERKWGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PHEESPKNNYKLFHEPAITLFNHTATFSRHSHLPLTTQYLESIEVLRSLRHMIPVQMKNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WSPLIGETGRSGOCGEDVCFFTINKTYQHSQMTRAFLFYGTDFSIDSLFLFRKDHHDWAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LRKRLAPLVYVQSDCNAPSDRDSYVRELMCHIEVDSYGECLHNRDLPQHLRNPSAMDDGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (DEC-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1586; D
Pred. No. 1.4e
44; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                 Craniata; V
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                              Vertebrata; Euteleostomi; i; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .4e-124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                               р.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67;
                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                           Mollicone
                                                                                                               t wo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                  new
                                                                                                                  human
                                                                                                                                     æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VODVTODNYIDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              alpha3-
                                                                                                               alpha3-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   203
```

```
RESULT

10 R 2247

10 R 2247

10 R 20

AC Q8

DT 011

                                                                                                                                                     Ş
                                Ş
                                                                                               B
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SON
                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg R.;
Submitted (FEB-2002) to the EMBL/GenBan Submitted (FEB-2002) to the EMBL/GenBan Submitted (FEB-2002) to the EMBL/GenBan EMBL, BC022579, AAH22579.1;
GO; GO:0016020; C:membrane; IEA.
GO; GO:00064817; F:fucosyltransferase ac GO; GO:0006486; Pigrotein amino acid gl InterPro; IFR001503; Glycotrans 10.
Pfam; PF00852; Glycotransf 10; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Hypothetical protein (Fragment).
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hypothetical protein.
NON TER 1
SEQUENCE 264 AA; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GG; GO:0008417; F:fucosyltransferase activity; IEA. GO; GO:0016757; F:transferase activity, transferring GO; GO:0016486; F:transferase activity, transferring InterPro; IPR001503; Glyco trans_10.

Pfam; Pf00852; Glyco trans_10; ITransferase, Glycosyltransferase, Glycosyltransferase,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8R247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8R247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                    300
                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133
                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             il Similarity
282; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                  FSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVR
                                                                                                                                              ELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEK
                                FWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVE
                                                                                                                                                                                                                                          FSRHSHLFLTTQYLEGVDVLKSLRYLVFLQAKNNLRQKLAFLVYVQSDCDFPSDRDSYVR
                                                                                                  ELMAYIEVDSYGECLQNRDLPQQLKNPASMDADAFYRVIAQYKFILAFENAVCDDYITEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKVSKSKVGIEPAGW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEK-----GLPPKRW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YGSPSITDWLPSNKSAILVSBFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GIDENIDSLELERKAHHDWAVEHEESEKNNYKLEHKEVITLENYTATESRHSHLELTIQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY
42.5%;
nilarity 83.7%;
Conservative 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30749 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57.1%;
96.6%;
                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1499; Di
Pred. No. 2.1e.
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                          Score 1115.5; DB 11
Pred. No. 2.2e-85;
D; Mismatches 17;
6DE96A68DA25EB13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity; IEA. glycosylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1e-117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        glycosyl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      264;
                                                                                                                                                                                                                                                                                                                                                                                 ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>σ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEA.
                                                                                                                                                                    299
                                                                                                                                                                                                                                             60
                                    359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    252
```

```
В
 밁
                            δ
                                                             В
                                                                                   δ
                                                                                                                         P &
                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Candelier J.J., Martinez-Duncker I., Oriol R., Mollicone R.;
"Cloning expression and genomic organization of a new human alpha3
If fucosyltransferase (PUTIO).";
Is Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

R EMBL; AJ535752; CAD59736.1; -.
R GO; GO:0016020; C:membrane; IEA.
R GO; GO:0016021; F:fucosyltransferase activity; IEA.
R GO; GO:0016757; F:transferase activity, transferring glycosyl...
R GO; GO:0016757; F:transferase activity, transferring glycosyl...
R GO; GO:0016757; F:transferase.
R GO; GO:00167503; Glyco transferase.
R Pfam; PF00852; Glyco transferase.
W Transferase; Glycosyltransferase.
SEQUENCE 505 AA; 57516 MW; CA5102A0537B37F6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8AWC7
Q8AWC7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-UNN-2003 (TrEMBLrel. 24, Last annotation updat
Putative alpha3-fucosyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
 445
                                 433
                                                               385
                                                                                             380
                                                                                                                            325
                                                                                                                                                        320
                                                                                                                                                                                          265
                                                                                                                                                                                                                       263
                                                                                                                                                                                                                                                                                   204
                                                                                                                                                                                                                                                                                                                   147
                                                                                                                                                                                                                                                                                                                                               144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                            182;
                                                                                                                                                                                                                                                                                                                                                                               88
                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                YLVPLQSKNKTRKR-LAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SGGWH 242
GFGSVEDLPGEDSWKEMWLQDYWQSLDQGEALTAMIRHNESHQGR-FW
                                 FAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW 480
                                                                                 WGVQDVNQDNYIDAFECMVCTKVWANIRLQB------KGLPPKRWEAEDTHLSCPEPTV 432
                                                                                                                                                  DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERK 379
                                                                                                                                                                                        RLRDTSTATTEDPEFMAFÍARYKFHLÁLENÁI CNDYMTEKLWRPMHLGAVPVYRGSPAVR
                                                                                                                                                                                                          L---XNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYYGSPSIT
                                                                                                                                                                                                                                                     PALPLAEKDAWRRRGYGPVLYMQSHCDVPSDRDRYVRELMKYIQVDSYGKCLHNRELPSE
                                                                                                                                                                                                                                                                                                                                               PRKAHHDWAVEHEESPKUNYKLEHKEVITLENYTATESRHSHLELTTQYLESIEVLKSLR
                                                                                                                                                                                                                                                                                                                                                                               PILLWWSGSLEPHFPGDTERI-DCPRGSCLVTRSRRAARHRRTKALIFYGTDFRAYEAPL
                                                                                                                                                                                                                                                                                                                                                                                                           PIMLWWS-----PLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AEDTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WKLKGKISNORLLTALNEREWGVQDINQDNYIDSFECMVCRRVWANSRLQEQ---VSEWK 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WKLKGEISNORLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPKRWE 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FWRPLKLGVVPVYYGSPTIADWLPSNRSAILVSEFSHPRELANFIRRLDYDDGLYETYVE
                                                                                                                            DWMPNNILSIILIDDFDSPQELAKYLDFLDKNGEEYMKYLEYKNLDGIKNQFLLESLERRE
                                                                                                                                                                                                                                                                                                                   PRLPHQTWALFHEESPMNNYLLSHPPGIRLFNYTATFRRESDYPLTLQWLPGAGYLRG---
                                                               WGVNDMTLPNYLNG#ECF1CDRENARVRAEQEHKKSRGKTPAPSPH1AHFQHMGCPMPTP
                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi;
Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                           34.2%; Score 899; DB 13; 44.6%; Pred. No. 7.5e-67;
                                                                                                                                                                                                                                                                                                                                                                                                                                            60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 146; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Phasianinae;
   491
                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 alpha3-
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IEA
                                                                                                                                                                                          324
                                                                                                                                                                                                                         319
                                                                                                                                                                                                                                                                                                                                                 203
                                                                                                                                                                                                                                                                                                                                                                               146
                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                              384
                                                                                                                                                                                                                                                       264
                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                   204
```

```
RESULT ID YEAR OF THE PROPERTY OF THE PROPERTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
    OCCUPATION NO OC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맒
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 178
                             01-MAR-2003 (TrEMBLrel. 23, C
01-MAR-2003 (TrEMBLrel. 23, I
01-OCT-2003 (TrEMBLrel. 25, I
Hypothetical zinc finger (Put
fucosyltransferase).
3110009039IK OR FUT11.
Mus musculus (Mouse).
                                                                                                                                                                                            Q8BHC9;
Q8BHC9;
01-MAR-2003
01-MAR-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R.;
Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databa Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databa EMBL; EC036037; AAH36037.1; -
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008417; F:fucosyltransferase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
GO; GO:0006486; P:proctein amino acid glycosylation;
InterPro; IPR001503; Glyco_transf_10.
Pfam; PF00852; Glyco_transf_10; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QBIYE4
QBIYE4;
QBIYE4;
QBIYE4;
Q1-MAR-2003 (TrEMBLrel. 23, Created)
Q1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
Q1-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Similar to putative alpha 1,3-fucosyl transferase.
Homo sapiens (Human).
Eukaryota, Metazoa; Chondata, Craniata, Vertebrata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eucheria; Primates; Catarrhini;
    Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134 TDFNIDSLPLPRKAHHDWAVFHBESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYL 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ტ
ტ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79 RKRKWELDSYPIMLWWSP-----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLITALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGLPP--KRWEAED 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLONRELPTARLODTATATTEDPELLAFLSRYKFHLALENAICNDYMTEKLWRPMHLGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ESIEVLKSLRYLVPLQSKNKLRKR-LAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THISCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLLDSLKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAASPGDSPVFEPHIAQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PGTAYLR - - RPVPPPMERAEWRRRGYAPLLYLQSHCDVPADRDRYVRELMRHIPVDSYGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TDFRASAAPLPRLAHOSWALLHEESPLNNFLLSHGPGIRLFNLTSTFSRHSDYPLSLQWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RPGREEAGDLPVILLWWSPGLFPHFPGDSERI-ECARGACVASRNRRALRDSRTRALLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SHMDCPVPTPGFGNVEEIPENDSWKEMWLQDYWQGLDQGEALTAMIHNNET-EQTKFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PVYRGSPSVRDWMPNNHSVILIDDFESPQKLAEFIDFLDKNDEEYMKYLAYKQPGGITNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        492 AA;
    Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55800 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.2%;
                                                                                                                                                              (Putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74;
                                                                                                                                                              Last sequence update)
Last annotation updat
utative alpha (1,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 872; DB 4; I
Pred. No. 1.3e-64;
4; Mismatches 146;
    Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B6B3B5B0CE9B3C50 CRC64;
                                                                                                                                                                                                                                                                                                                                                                   489
Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ertebrata; Euteleostomi; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IEA
    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124
```

NCBI_TaxID=10090; [1]

Eutheria;

Rodentia; Sciurognathi; Muridae; Murinae; Mus

SEQUENCE FROM Submitted

SEQUENCE FROM I STRAIN=C57BL; ' Roos C.;

```
R PIR; PT0558; PT0677.

R PIR; PT0558; PT0677.

R PIR; PT0559; PT0677.

R MGD; MGI:1920318; 3110009G03Rik.

R MGD; MGI:1920318; 3110009G03Rik.

R GG; GO:0016026; C:membrane; IEA.

R GG; GO:0006417; F:fucosyltransferase activity; IEA.

R GG; GO:0006486; P:protein amino acid glycosylation; IEA.

R GG; GO:0006486; P:protein amino acid glycosylation; IEA.

R InterPro; IPR001503; Glyco trans 10.

R InterPro; IPR007087; Znf_C2H2.

R InterPro; IPR007087; Znf_C2H2.

R InterPro; IPR007087; Znf_C2H2.

R PROSITE; PS00028; ZINC_FINGER_C2H2.1; 1.

R PROSITE; PS00028; ZNG_FINGER_C2H2.1; 1.

R PROSITE; PS00028; ZNG_FINGER_C2H3.

R PROSITE; PS00028; ZNG_FINGER_C2H3.

R PROSITE; PS00028; ZNG_FINGER_C2H3.

R PROSITE; PS00028; ZNG_FINGER_C2H3.

R PROSITE; PS00028; ZNG_FINGER_C2H3.1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AK030310; BAC26892.1; -.
EMBL; AK046461; BAC32740.1; -.
EMBL; AJ542393; CAD62573.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Brain, Ovary,
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roos C., Kolmer M., Mattila P., Renkonen R., "Composition of Drosophila melanogaster proteome involved fucosylated glycan metabolism.", Biol. Chem. 277:3168-3175(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL; TISSUE=Kidney; MEDLINE=21671316; PubMed=11698403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o,770 full-length cDNAs.",
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the RIKEN Genome Exploration Research "Analysis of the mouse transcriptome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIKEN Genome Exploration Research
GFGKVEEIPENDSWKEMWLQDYWQGLYQGEALTAMIHNNET-QQRKFWDYV 478
                                                                                                                                                                    WGVQDVNQDNYIDAFECMVCTKVWANIRLQEK-----GLP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YLVPLQSKNKLRKR-LAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQ-
                                                    FAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFWGLV
                                                                                                                                                                                                                                                                                                    DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERK 379
                                                                                                                                                                                                                                                                                                                                                                      RLQDTATATTEDPELMAFLSRYKFHLALENAI CNDYMTEKLWRPMHLGAVPVYRGSPSVR
                                                                                                                                                                                                                                                                                                                                                                                                                           QLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAPPPRERAEWRRRGYAPLLYLQSHCDVPSDRDRYVRELMRYIPVDSYGKCLQNREPPTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRLAHOSWALLHEESPLNNFLLSHGPGIRLFNLTATFSRHSDYPLPLOWLPGAAYLR--R
                                                                                                                                                                                                                                                DWMPNNHSVILIDDFESPQKLAEFIDFLDKNDDEYMKYLAYKQPGGITNQFLLDNLEHRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PVLLWWSPGLFPHFPGDSERI-QCAHGACVASRDRRARADPRTRALLFYGTDFRAADAPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIMIWWSP-----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPL
                                                                                                                      WGVNDPMLPNYLNGFECFVCDHELARLNAEKAHASSHGDI PVPEPRIAQSSHMNCPVPTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (FEB-2003) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N.A.
TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 862;
Pred. No. 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11;
.1e-64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Uterus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phase I & II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                    PKRWEAEDTHLSCPEPTV 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O.
                                                                                                                                                                                                                                                368
                                                                                                                                                                                                                                                                                                                                                                      308
                                                                                                                                                                                                                                                                                                                                                                                                                                 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRESULT ON CONTROL OF 
                                                                                                                   g
                                                                                                                                                                 Š
                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RC STRAIN-57812/60; TISSUE=Embryo;
RC MEDLINE-21085660; PubMed=11217851;
RX MEDLINE-21085660; PubMed=11217851;
RA MARINE-21085660; PubMed=11217851;
RA ALZAWA T., Hara A., Shibatta K., Yoshino M., Itoh M., Ishii Y.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Izawa M., Nishi K., Bono H., Kasukawa T., Saito R.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Carninci P., de Bonaldo M.F.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Mordone P., Ring B., Ringwald M., Hume D.A., Kamiya M., Lee N.H.,
RA Nordone P., Ring B., Ringwald M., Marzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Seya T., Shibata Y., Storch K.-F.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashtzaki Y...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001
01-JUN-2001
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Functional annotation of a full-length mouse cDNA collection.";

Nature 409:685-690(2001).

EMBL; AK014029; BAB29123.1; -.

MGD; MGI:1920318; 3110009G03Rik.

GO; GO:0016020; C:membrane; IEA.
GO; GO:0006417; F:fuccsyltransferase activity; IEA.
GO; GO:0006486; P:protein amino acid glycosylation; IEA.
GO; GO:0006497; Frotein amino acid glycosylation; IEA.
InterPro; IPR001503; Glyco_trans_10.
InterPro; IPR007087; ZNC_trans_11.

Pfam; PF00852; Glyco_transf_10.
PROSITE; PS00028; ZNC_FINGER_C2H2_1; 1.

PROSITE; PS00028; ZNC_FINGER_C2H2_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9CXS9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wynshaw-Boris A
Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3110009G03RIK.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3110009G03Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12
309
                                                       320
                                                                                                                                                                                                                                                                                                                                                                      131
                                                                                                                                                                                                                                                                                                                                                                                                                                 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                    QLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSIT
                                                                                                                                                                                                                                                                             YLVPLQSKNKLRKR-LAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQ-
DWMPNNHSVILIDDFESPQKLAEFIDFLDKNDDEYMKYLAYKQPGGITNQFLLDNLEHRE
                                                                                                                      PRIAHQSWALLHEESPINNFLISHGPGIRLENLTATESRHSDYPLPLQWLPGAAYLR--R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PVLLWWSPSLFPHFPGDSERI-QCAHRACVASRDRRARADPRTRALLFYGTDFRAADAPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIMLWWSP----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPL
                                                    DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNORLLTALRERK
                                                                                                                                                                                                                                            PAPPPRERAEWRRRGYAPLLYLOSHCDVPSDRDRYVRELMRYIPVDSYGKCLONREPPTV
                                                                                                                                                                                                                                                                                                                                                                                                                                 PRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17,
17,
24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 861; DE
Pred. No. 1.1e
58; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11;
..1e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲
,
368
                                                           379
                                                                                                                         308
                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                         188
                                                                                                                                                                                                                                                                                                                                                                                                                                     203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                    319
                                                                                                                                                                                                                                                248
```

Matches Query Match Best Local

Similarity

Conservative

Õ B Ś 밁 Š 밁 Ş 밁 δõ B Š D, ş

369 380 309 249 262 189

131 204

72 89

```
RESIGNATION OF STREET OF S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                          S
                                                                                                                                                                      밁
                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AJ535753; CAD59737.1; --
GO; GO:0016020; C:nembrane; IEA.
GO; GO:0008417; F:fucosyltransferase activity; IEA.
GO; GO:0016757; F:transferase activity, transferring glycosyl.
GO; GO:0016757; F:transferase activity, transferring glycosyl.
InterPro; IPR001503; Glyco-trans_10.
Pfam; PF00852; Glyco-trans_10.
Transferase; Glycosyltransferase.
SEQUENCE 493 AA; 55841 MW; 2993761C0860140B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8CG40 PRELIMINARY; PRT; 493 AA.
Q8CG40;
Q1-MAR-2003 (TrEMBLrel. 23, Created)
O1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
O1-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Putative alpha3-fucosyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Candelier J.J., Martinez-Duncker I., Oriol R., "Cloning, expression and genomic organization of the computation of the computat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Mētazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=Rattus norvegicus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      380
    433
                                                                                   433
                                                                                                                                                                           373
                                                                                                                                                                                                                                                         380
                                                                                                                                                                                                                                                                                                                                                 313
                                                                                                                                                                                                                                                                                                                                                                                                                                         320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WGVQDVNQDNYIDAFECMVCTKVWANIRLQEK-----GLP-PKRWEAEDTHLSCPEPTV 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GFGKVEEIPENDSWKEMWLQDYWQGLYQGEALTAMIHNNET-QQRKFWDYV 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFWGLV
GFGKVEEIPENDSWKEMWLQDYWQGLYQGEALTAMIHNNETQQS-KFWDYV
                                                                                                                                                                                                                                                     WGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGLPP-KRWEAEDTHLSCPEPTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YLVPLQSKNKLRKR-LAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIMLWWSP----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPL 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WGVNDPMLPNYLNGFECFVCDHELARLNAEKAHASSHGDI PVPEPRIAQSSHMNCPVPTP
                                                                                                                                                                                                                                                                                                                                                 DWMPNNHSVILIDDFESPOKLAEFIDFLDKNDEEYMKYLAYKOPGGITNOFLLDNLEHRE
                                                                                                                                                                                                                                                                                                                                                                                                                                     DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNORLLTALRERK 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLQDTATATTEDPELMAFLSRYKFHLALEKAICNDYMTEKLWRPMHLGAVPVYRGSPSVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSIT 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAPPLRERAEWRRRGYAPLLYLOSHCDVPSDRDRYVRELMRYIPVDSYGKCLQNREPPTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRLAHOSWALLHEESPLNNFLLSHGPGIRLENLTATESRHSDYPLPLQWLPGAAYLR--R
                                                                                       FAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFWGLV 483
                                                                                                                                                                               WGVNDPMLPNYLNGFECFVCDHELARLDAEKAHESSPRDIPVLEPHIAQLSHMDCPVPTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32.4%; Score 851; DB 11; 43.1%; Pred. No. 7.7e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          146; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Mollicone R.; of a new human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 493;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        alpha3-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       428
                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                203
                                                                                                                                                                                                                                                                            432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                                                                                                                                                                                    432
```

RESULT

```
OX NAME HERO
                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                            RESULT 15
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Petit D., Picaud F., Dupuy F., Germot A., Julien R., Maftah A.;
"Core a3- and a6-fucosyltransferases in Drosophila: characteriz
and origin of diversity.";
Submitted (NOV-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AY061932; AAL31643.1;
EMBL; AY061932; AAL31643.1;
EQ; GO:0016030; C:membrane; IEA.
GO; GO:0016757; F:transferase activity, transferring glycosyl.
GO; GO:0006406; P:protein amino acid glycosylation; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q81928 PRELIMINARY; PRT; 444 AA.
Q81928; Q1928; Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Alpha 1,3 fucosyltransferase.
Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
MCBI TaxID=7327;
                                                                       Q9BSR3;
01-JUN-2001
01-JUN-2001
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001503; Glyco_trans_10. pfam; PF00852; Glyco_transf_10; 1. Transferase; Glycosyltransferase.
                                                                                                                               Q9BSR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                            Hypothetical protein. Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                               317
                                                                                                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                                                                                                               197
                                                                                                                                                                                                                                                                                                                                                                                                                                       137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                            245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                         368
                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28 NIINYENIKFNS------PVELVWWSRDMSWNYDVQRQCGIHTCRITNKRS--RRPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68 SFLKKEGLTENRKRKWELDSYPI-MLWWS-PLTGETGRLGQCGADACFFTINRTYLHHHM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                               TKAFLFYGTDENIDSLFLFRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSH
                                                                                                                                                                                                                                                               NRRNPISNKKLLHNLVTROYHIGDSSPGASLFEKFECAVCYHVINTAR-----NVK
                                                                                                                                                                                                                                                                                      --KGEISNQRLLTALRERKWGVQDVNQD-NYIDAFECMVCTKVWANIRLQEKGLPPKRWE
                                                                                                                                                                                                                                                                                                                                          PLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKL
                                                                                                                                                                                                                                                                                                                                                                                LPIDSYGSCLRNRDLPESLOKDYLNNLYSPELLRFLSEYKFMIAIENAACPDYITEKFWR
                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLTIMYLPSGEALTSKDYYVTFDGKSKYGYRPSTSVVFLÓSDCDTMSGREDYVKELMKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPLTTQYLESIEVLKSLRYLVPLQSKNKLRKR-LAPLVYVQSDCDPPSDRDSYVRBLMTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ARGVLFYGSNIKTGDFFLFRNEHQIWALLHEESFRNTFFVSNKEFLRHFHFTSTFSRYSN
                                                                                                                                                                                                                                   AEDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEF
                                                                                                                                                                                                                                                                                                                      PLINGVIPIYFGSPTIKDWEPNNKSAIFVNDFQNPQALVEYLNKLADNKKLYNSYRQHKL
                                                                                                                                                                                                    444 AA;
                                                                       1 (TrEMBLrel. 17, 11 (TrEMBLrel. 17, 12) (TrEMBLrel. 22, 12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51800 MW;
                                 Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; 08
                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 711;
Pred. No. 3
                   Craniata; Vi
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6D95748CA5EF2A76 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches 154;
                                                                                                                                    143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; DB 5;
3.7e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ., Julien R., Maftah A.;
Drosophila: characterization
                  Vertebrata; Euteleostomi; i; Hominidae; Homo.
                                                                                                                                    $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 444;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IEA.
                                                                                                                                                                                                                                                                    367
                                                                                                                                                                                                                                                                                               419
                                                                                                                                                                                                            425
                                                                                                                                                                                                                                         479
                                                                                                                                                                                                                                                                                                                            316
                                                                                                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                                                                                                   256
                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                            196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76
```

```
RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE-ovary;

RA Strausberg R.;

RA HDE About R.;

RA Strausberg R.;

RA
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein - protein search, using sw model
       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
    710.5

268.5

263.5

244.5

244.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

234.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

234.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

233.5

234.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

235.5

23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141681 seqs, 52070155 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-080-960-2
2625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           September 9, 2004, 21:30:25; Search time 25 Seconds (without alignments)
1012.244 Million cell updates/sec
    SwissProt_42:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MKVTGPPQGVTDSMQCFNDQ.....LVDRNQNFSSQEFWGLVFKD 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
    DB
  summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141681
Obvlc1 drosophila
Obvlc1 drosophila
Obvlc1 drosophila
Oli126 bos taurus
P51993 homo sapien
P56434 pan troglod
Oli128 homo sapien
P56433 pan troglod
Oli131 mus musculu
Obc8w3 arabidopsis
Oli131 mus musculu
Obc8w3 arabidopsis
Oli127 mus musculu
Obc8w3 arabidopsis
Occeptarabidopsis
Oc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
```

PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	RES	
Q9VEC 28-FEE 10-OCG Alpha fucoss fucoss fucoss fucoss Forma Energy Exphydi NCBI - 1 SEQUEN STRAII MEDLII Fabini Fa	<u>_</u> _₽	44444 0007 0108 0108 0108
TO SO, A BUNDANCH MEN ON THE STAND OF CLOSES OF CONTRACT OF STANDING STANDI	DRO	97 97 97 96 97 97 97 98 98 98 98 98 98 98 98 98 98 98 98 98
empirial Politica Pol	STA	
transition of the control of the con	TANDARD;	747 809 1345 704 805 486 1318 1729 1729 2339 550
ist seeted list seet seet seet seet seet seet seet s		
reated) set sequence update) set annotation update fruit fly). (Fruit fly). popoda; Hexapoda; In popoda; Hexapoda; In popoda; Hexapoda; In Altmann F., Wilson alphal, 3-fucosylated nusferase cDNA from popural anti-horseradi 3. Holt R.A., Evans F.E., Li P.W., Hosk Richards S., Ashbur Richards S., Ashbur Richards S., Ashbur Richards S., Ashbur Richards S., Brackstei Berman B.P., Brackstei Butler H., Cadieu E Dahlke C., Mays A.D. Deng S., Baryakta Berman B.P., Bhanda Bouck J., Brokstei Butler H., Cadieu E Dahlke C., Mays A.D. Deng C., Gola Bouck J., Brokstei Butler H., Gd Z., Gela Butler H., Gd Z., Gela Butler H., Gu Z., Gela R., Kraft C., Kravitz Sky A.A., Li J.H., Li Josh T.C., McLeod M.P V., Mobarry C., Morro N., Nuson K., Nusskern S., Pan S., Pollard J., Saunders R.D.C., S Rocketter Nixon K., Nusskern S., Marsey C., Morro N., Nuson K., Nusskern S., Pan S., Pollard J., Saunders R.D.C., S	AL	Y030 SUS2 VCAP VCAP VCAP VCAP VCAP VCAP VCAP VCAP
	ALIGNMENTS	DUREPA PEAVIJ PAST YEAST ARATH ROTHD SCHPO YEAST PLAFA YEAST PLAFA PARATH
update) on update) con updated gl) con updated	ENTS	наминовная В
0 4 N P+	AA.	
בע אַ בּער בַּער בַּער בַער בַער בַער בַער בַער בַער בַער בַ		
The property of the property o		P277
n Han Pakalalalalalan Pakalalalalalan Handilala		347 347 472 917 349 957 957 957 957
TARE AND THE STATE OF THE STATE		urea pisu huma sacc arab huma schi schi sacch schi sacch sacch
G		plam shall hall hall hall hall hall hall hal
		asma satie herpe romyc lopsis rotav romyc romyc romyc romyc dium ddium

```
A Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.F., Dulling A.C., Stapleton M., Strong R., Sun E.,
A Spier E., Spradling A.C., Turner R., Venter E., Wang A.H., Wang X.,
A Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
A Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu X., Smith H.O.,
RA Gibbs R.A., Wyers E.W., Rubin G.M., Venter J.C.;
RT The genome sequence of Drosophila melanogaster.";
Science 287:2185-2195(2000).
CC -!- SIMIHARI GIQCONJILON: Type II membrane protein. Membrane-bound
form in trans cisternae of Golqi (By similarity).
CC -:- SIMILARITY: Belongs to the glycosyltransferase family 10.
                           Ś
                                                             밁
                                                                                           Ş
                                                                                                                             밁
                                                                                                                                                    Ş
                                                                                                                                                                                           밁
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Transferase; Gl
Signal-anchor;
DOMAIN 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AJ302046; CRC41642.1; -.
EMBL; AE03624; AAF52773.1; -.
FlyBase; FEBEN0032117; FucTB.
InterPro; IPR001503; Glyco_trans_10.
Ffam; PF00852; Glyco_transf_10; 1.
Transferase; Glyco_transf_10; 1.
Signal-anchor; Golgi stack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
                              421
                                                             317
                                                                                                                             257
                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                        137
                                                                                             363
                                                                                                                                                          304
                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                       77
                                                                                                                                                                                                                                                                                                                                                                                      28
                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                           LKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKL-
                                                                                                                                                                                         LPIDSYGSCLRURDLPERQKDYLNULYSPELLRFLSEYKFMIAIENAACPDYITEKFWRP
                                                                                                                                                                                                          IEVDSYGECLRNKDLPQQLKNPA-SMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRP
                                                                                                                                                                                                                                                                                   LPLTTQYLESIEVLKSLRYLVPLQSKNKLRKR-LAPLYYVQSDCDPPSDRDSYVRELMTY
                                                                                                                                                                                                                                                                                                                    RGVLFYGSNIKTGDFPLPRNEHQIWALLHEESPRNTPFVSNKEFLRHFHTTSTFSRYSN
                                                                                                                                                                                                                                                                                                                                                                                                                      SFLXKEGLTFNRKRKWELDSYPI-MLWWS-PLTGETGRLGQCGADACFFTINRTYLHHHM 125
 DLRHYNCPLEPVYAKMEGQKIPQNVAD-
                              EDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEF
                                                                                   -KGEISNORLLTALRERKWGVODVNOD-NYIDAFECMVCTKVWANIRLQEKGLPPKRWEA
                                                                                                                             LIMGVIPIYFGSPTIKDWEPNNKSAIFVNDFQNPQALVEYLNKLADNKKLYNSYRQHKLN
                                                                                                                                                                                                                                                          LPLITMYLPSGEALTSKDYYVTFDGKSKYGYRPSTSVVFLOSDCDTMSGREDYVKELMKH
                                                                                                                                                                                                                                                                                                                                                      TKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSH
                                                                                                                                                                                                                                                                                                                                                                                      NIINYENIKFNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
278
436
439
214
408
416
416
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   443
278
436
439
214
408
416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51756 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CYTOPLASMIC (POTENTIAL).

SIGNAL-ANCHOR (TYPE-II MEMERANE PROT
(POTENTIAL).

LUMENAL, CATALYTIC (POTENTIAL).

N-LINKED (GLCNAC. ..) (POTENTIAL).

N-SI (IN REF. 1).

V -> I (IN REF. 1).

U -> N (IN REF. 1).

D -> N (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                   81; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 710.5;
Pred. No. 7.5
                                                                                                                                                                                                                                                                                                                                                                                      - PVELVWWSRDMSWNYDVQRQCGIHTCRITNKRS---RRPW
WRAAMEVGQCQAKVLDEFFRRDIGFNDAEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .9e-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEMBRANE PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         collaboration -
                                                                --NVKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                479
                                                                                                 420
                                                                                                                             316
                                                                                                                                                            362
                                                                                                                                                                                                                           303
                                                                                                                                                                                                                                                          196
                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                         136
                                                                                                                                                                                                                                                                                                                                                      185
                                                                                                                                                                                                                                                                                                                                                                                      76
                                                              367
                                                                                                                                                                                            256
```

```
RESULT 2

PUTA_DROME

AC GOVULS; QASVTS;

AC GOVULS; QASVTS;

DT 28-FEB-2003 (Rel. 41, Created)

DT 28-FEB-2003 (Rel. 42, Last annotation update)

DF 26-FEB-2003 (Rel. 42, Last annotation update)

                                                                                                                                                                               RC STRAINS Excellent

RX MEDLINE =20196006; PubMed=10731132;

RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,

RA Adams M.D., Celniker S.E., Holt R.A., Hoskins R.A., Galle R.F.,

RA Adams M.D., Celniker S.E., Richards S., Ashburner M., Henderson S.N.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Ffeiffer B.D.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Ffeiffer B.D.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Ffeiffer B.D.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Ffeiffer B.D.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Ffeiffer B.D.,

RA George R.A., Lewis S.E., Richards S., Ashburner M., Ffeiffer B.D.,

RA Barlaw R.M., Basu A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,

RA Ballew R.M., Basu A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,

RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Bessley E.M.,

RA Berson K.Y., Benos P.V., Bernan B.P., Banddari D., Botshakov S.,

RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brothier P.,

RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,

RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,

RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,

RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,

RA Godek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,

RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,

RA Godek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,

RA Horstin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,

RA Horstin D., Houston K.A., Howland T.J., Wein M.-H., Ibagwam C.,

RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,

RA Haris N.L., Harvey D.A., Heiman T.J., McLeod M.P., McPherson D.,

RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,

RA Haris N.L., Mary M., Mary M., McLeod M.P., McPherson D.,

RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,

RA Haris N.L., Mary M., Mary M., McLeod M.P., McPherson D.,

RA Kimm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Hexapoda, Inse
Neoptera; Endopterygota; Diptera; Brachycera;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=21359431; PubMed=11382750; Fabini G., Freilinger A., Altmann F., Wilson I.B.H.; Fabini G., Freilinger A., Altmann F., Wilson I.B.H.; "Identification of core alphal,3-fucosylated glycans and cloning of the requisite fucosyltransferase cDNA from Drosophila melanogaster: Potential basis of the neural anti-horseradish peroxidase epitope."
J. Biol. Chem. 276:28058-28067(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insecta; Pterygota;
era; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peroxidase epitope.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.4.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .214)
```

MEDLINE=22426069; PubMed=12537572; Misra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.

```
, 15
                                                                                                                                                                                                                   g
                                                                                  Ş
                                                                                                                                   Query Match
Best Local S
Matches 100
                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AJ302045; CAC41641.1; -.
EMBL; AJ302045; CAC41641.1; -.
EMBL; AY302332; AAF49657.2; -.
EMBL; AY071324; AAL48946.1; ALT_FRAME.

EMBL; AY071324; AAL48946.1; ALT_FRAME.

FlyBase; FBgn0036485; FucTA.

GO; GO:0001891; F:glycoprotein 3-alpha-L-fucosyltransferase a.

GO; GO:0018392; F:glycoprotein amino acid glycosyltransferase a.

GO; GO:0018392; F:grotein amino acid glycosyltransferase;

THEOREM CONTROL TRANSFERAME.

PERM; PF00852; Glycosyltransferase; Glycoprotein; Transmembrane;

Signal-anchor; Golgi stack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "A Drosophila full-length cDNA resource.";

Genome Biol. 3:RESEARCH0080.1-RESEARCH0080.8 (2002).

-I- FUNCTION: Catalyzes alpha-1, 3-glycosidic linkages.
-I- CATALYTIC ACTIVITY: GDP-L-fucose + N(4)-{N-acetyl-beta-D-glucosaminyl-(1->2)-alpha-D-mannosyl-(1->3)-[N-acetyl-beta-D-glucosaminyl-(1->2)-alpha-D-mannosyl-(1->6)-beta-D-mannosyl-(1->4)-N-acetyl-beta-D-glucosaminyl-(1->2)-alpha-D-mannosyl-(1->3)-[N-acetyl-beta-D-glucosaminyl-(1->2)-alpha-D-mannosyl-(1->3)-[N-acetyl-beta-D-glucosaminyl-(1->2)-alpha-D-mannosyl-(1->3)-[N-acetyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-beta-D-glucosaminyl-(1->4)-N-acetyl-beta-D-glucosaminyl-glapha-D-mannosyl-(1->5)-beta-D-mannosyl-(1->5)-beta-D-glucosaminyl-beta-D-glucosaminyl-glapha-L-fucosyl-(1->3)]-N-acetyl-beta-D-glucosaminyl-glapha-b-fucosyl-(1->3)]-
                                                                                                                                                                                                               DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                             Signal
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            George R.A., Guarin H.,
Rubin G.M., Celniker S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith C.D., Tupy J.L., Whitfield E.J., Bayraktaroglu L., Berman B Bettencourt B.R., Celniker S.E., de Grey A.D., Drysdale R.A., Harris N.L., Alchter J., Russo S., Schroeder A.J., Shu S.O., Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=Berkeley; TISSUE=Embryo; MEDLINE=22426066; PubMed=12537569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               systematic review
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Annotation of the Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PATHWAY: Glycosylation.
SUBCELLULAR LOCATION: Type II membrane protein. Membrane-bound form in trans cisternae of Golgi (By similarity).
SIMILARITY: Belongs to the glycosyltransferase family 10.
CAUTION: Ref.4 sequence differs from that shown due to a frameshift in position 112.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COFACTOR: Manganese
                166
                                                      199
                                                                                          106
                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n M., Carrin H., J
              FHKPVITLFNYTATFSRHSHLPL---TTQYLES--IEVLKSLRYLVPLQSKNKLRKRLAP
                                                                                          QCGADACEFTINETYLHHHMTKAELFYGTDENIDSLELERKAHHDWAVFHEESEKNNYKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM N.A.
                                                      KCPVDTCELTANRDLA---STADMILYKDHYIPTGIRRPSNSKQVSMLYYLECP---YHT
                                                                                                                                11.4%;
llarity 30.5%;
Conservative '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3:RESEARCH0083.1-RESEARCH0083.22(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carlson J.W., Brokstein P., Yu C
Guarin H., Kronmiller B., Pacleb
                                                                                                                                                                                                                 ΑA,
                                                                                                                                                                                                                                  295
295
295
295
                                                                                                                                                                                                                   59159
                                                                                                                                                                                                                   ¥.
                                                                                                                                                                                                                             CYTOPLASMIC (POTENTIAL).

SIGNAL-ANCHOR (TYPE-II MEMBRANE PROT
(POTENTIAL).

LUMENAL, CATALYTIC (POTENTIAL).

N-LINKED (GLCNAC. ..) (POTENTIAL).
                                                                                                                                   44;
                                                                                                                                                      Score 300.5; DB 1
Pred. No. 3.2e-16;
                                                                                                                                                                                                                 D9DA06078E6010C2 CRC64;
                                                                                                                                   Mismatches
                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                euchromatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C., Champe M.,
b J.M., Park S.,
                                                                                                                                   Indels
                                                                                                                                                                      Length
                                                                                                                                                                           503;
                                                                                                                                   55,
                                                                                                                                                                                                                                                                                                                                                        PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wan K.H.,
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 в.Р.,
                                                      252
                                                                                            165
```

```
RESULT 3
FUT3_BOVIN
ID FUT3_BOVIN
AC Q11126;
DT 01-0CT-1996
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                            J. Biol. Chem. 272:8764-8773(1997).

-i- FUNCTION: May catalyze alpha-1,3 and alpha-1,4 glycosidic linkage involved in the expression of siallyl Lewis X and Lewis X/SSEA-1 antigens. It may be involved in blood group Lewis determination.

-i- CATALYTIC ACTIVITY: GDP-beta-L-fucose + beta-D-galactosyl-(1-3)-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-1996 (Rel. 34, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Galactoside 3(4)-L-fucosyltransferase (EC 2.4.1.65) (Blood group Lewis Galactoside 3(4)-L-fucosyltransferase) (FUCT-1)
                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oulmouden A., Wierinckx A., Petit J.-M., Costache M., Palcic M. Mollicone R., Oriol R., Julien R.;
"Molecular cloning and expression of a bovine alpha(1,3)-fucesyltransferase gene homologous to a putative ancestor gene human FUT3-FUT5-FUT6 cluster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota;
Mammalia; E
                                InterPro; IPR001503; Glyco trans 10.
Pfam; PF00852; Glyco transf_10; 1.
Transferase; Glycosyltransferase; Glycoprotein;
                                                                                            EMBL; X87810; CAA61079.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97236840; PubMed=9079712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bovidae; Bovinae; Bos.
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                N-acetyl-D-glucosaminyl-R = GDP + beta-D-galactosyl-(1->3)-[alpha-L-fucosyl-(1->4)]-N-acetyl-beta-D-glucosaminyl-R.

PATHWAY: Glycosylation.
SUBCELLULAR LOCATION: Type II membrane protein. Membrane-bound form in trans cisternae of Golgi.
TISSUE SPECIFICITY: LIVER, KIDNEY, LUNG AND BRAIN.
MISCELLANGOUS: Also acts on the corresponding 1,4-galactosyl derivative, forming 1,3-L-fucosyl links.
SIMILARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QYKFILAFENAVCDDYITEKFW-RPLKLGVVPVYYGS-PSITDWLPSNKSAILVSEFSHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RELASYIRRIDSDDRLYEAYVEWKLKGEISNQ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DYKFYLAFENSNCKDYITEKFFVNALNRRVLPIVMGARPEDYEVSAPRRSYIHVDEFSSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VAWFVSNCGARNGRLQYAHELQKYIEVDIYGACGNFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNXDLPQQLKNPASMDADGFYRII-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QNVKVPDAINWTATYRRDSTIVAPYEKWQYYDTKVQQQEQDINY----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --YTDLNDWWRGPGVCTTRSWRNFKARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNYIDAFECM----VC-TKVWANIRLQE 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KELAEYLRILDHDDELYNSYFKWKGTGEFINTYYWCRVCATLHNEEQLRKPRW-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Bovine)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J.-M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Costache M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -RLLTA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -CSRSTADKCFEILDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LRERKWGVQDVNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SVNKTKK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279
```

```
당 상 당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SPTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 93
[3]
SEQUENCE FROM N.A.
TISSUB-Kidney;
MEDLINE=95378269; PubMed=7650030;
MEDLINE=95378269; PubMed=7650030;
Cameron H.S., Szczepaniak D., Weston B.W.;
"Expression of human chronosome 19n albha(1 3)-fucosyltransferase
                                                                                                                SEQUENCE FROM N.A.

MEDITINE=93077550; PubMed=1339443;

Weston B.W., Smith P.L., Kelly R.J., Lowe J.B.;

"Molecular cloning of a fourth member of a human alpha
"Molecular cloning of a fourth member of a human sequences
that determine expression of the Lewis x, sialyl Lewis x, and
difucosyl transferase gene family. Multiple homologous sequences
that determine expression of the Lewis x, sialyl Lewis x, and
difucosyl sialyl Lewis x epitopes.";
3. Biol. Chem. 267:24575-24584(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUT6_HUMAN STANDARD; PRT; 359 AA.

PD1.93;
01-OCT-1996 (Rel. 34, Created)
01-OCT-296 (Rel. 34, Last sequence update)
01-OCT-296 (Rel. 42, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.65) (Galactoside 3-L-fucosyltransferase) (Fucosyltransferase 6) (FUCT-VI).

FUT6 OR FCT3A,
Homo sapiens (Human).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

MCBI TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

MEDILINE=92392318; PubMed=1520296;

MEDILINE=92392318; PubMed=1520296;

MEDILINE=92392318; PubMed=1520296;

MEDILINE=92318; PubMed=1520296;

MEDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       al Similarity
93; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPVYYGSPSIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YEQFLPP-KAFIHVEDFQSPKDLAQYLLALDKDYASYLNYFRWR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VILWIWPF-NQPVALSRCSELWPGTADCQLTVNRS--EYPQADAVLVHHREVSHRPQMQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35
100
158
189
365 /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           365 L
100 N
158 N
189 N
42654 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWALMFCKACW---KLOOE 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL-ANCHOR (TYPE-II MEMBRANE PRO
(POTENTIAL).
LUMENAL, CATALYTIC (POTENTIAL).
N-LINKED (GLCNAC. .) (PROBABLE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 268.5; DB
Pred. No. 7e-14;
52; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲.
                                                                                                                                                                                                                                                                                                                                                               fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              284
                            В
                                                               Ş
                                                                                                                  В
                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                  DR EMBL; M98825; AAA99222.1; -.

DR EMBL; L01698; AAB03078.1; -.

DR EMBL; U27333; AAC50192.1; -.

DR EMBL; U27334; AAC50193.1; -.

DR EMBL; U27335; AAC50194.1; -.

DR EMBL; U27335; AAC50195.1; -.

DR EMBL; U27332; AAC50196.1; -.

DR EMBL; U27332; AAC50191.1; ALT_SEQ.

DR EMBL; U27332; AAC50191.1; ALT_SEQ.

DR EMBL; U27337; AAC50191.1; ALT_SEQ.

DR EMBL; U27337; AAC50191.1; ALT_SEQ.

DR MIN; 138836; -.

DR PIR; A45156; ASISCO transferase activity; TAS.

DR MIN; 138836; -.

DR MIN; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 98
                                                                                                                                                                                                                                                                                                                                                               DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=2;
IsoId=P51993-2; Sequence=VSP_001780;
IsoId=P51993-2; Sequence=VSP_001780;
ITSSUE SPECIFICITY: KIDNEY, LIVER, COLON, SMALL INTESTINE
BLADDER, UTERUS AND SALIVARY GLAND.
BLADDER, UTERUS AND SALIVARY GLAND.
ISIMILARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=1;
IsoId=P51993-1; Sequence=Displayed;
                                                                                                                       60
                                                                                                                                                        87
                                                                                                                                                                                                         ch 10.0%;
| Similarity 27.4%;
| 98; Conservative 4
                                                                                                                     SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR------TYLHHHMTKAFLFYG
                                                        TDENIDSLE-LPRKAHHDWAVFHEESPKNNYKLFHKFVITLFNYTATFSRHSHLFLTTQY
                                PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN-
                                                                                                                                                                                                                                                                                                  359
                                                                                                                                                                                                                                                                                                                                                                 35
46
91
153
184
348
                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                                 359
46
91
153
184
359
                                                                                                                                                                                                                                                                                                  41859 MW;
                                                                                                                                                                                                           48;
                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
LUMENAL, CATALYTIC (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                           Score 263; DB
Pred. No. 1.9e
18; Mismatches
                                                                                                                                                                                                                                                                                                isoform 2).
/FTId=VSP_001780.
67ABDF058F0999DA
                                                                                                                                                                                                       DB 1; L
l.9e-13;
hes 118;
                                                                                                                                                                                                                                                   Length 359;
                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
```

ş

94;

Gaps

192 115

```
FUTG PANTR
ID FUTG P
AC P56334
DT 15-UIL
OC NAMMAIN
CC -!- SI
CC -!- SI
CC -I- PC
CC -!- SI
CC -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Costache M. Apoli P.-A. Cailleau A., Elmgren A., Larson G.,
Henry S., Blancher A., Iordachescu D., Oriol R., Mollicone R.;
"Evolution of fucosyltransferase genes in vertebrates.";
J. Biol. Chem. 27:29721-29728(1997).
-i- FUNCTION: ENZYME INVOLVED IN THE BIOSYNTHESIS OF THE E-SELECTIN
LIGAND, SIALYL-LEWIS X. CATALYZES THE TRANSFER OF FUCOSE FROM GDP-
BETA-FUCOSE TO ALPHA-2, 3 SIALYLATED SUBSTRATES (BY SIMILARITY).
-i- CATALYTIC ACTIVITY: GDP-beta-L-fucose + beta-D-galactosyl-(1->3)-
N-acetyl-D-glucosaminyl-R = GDP + beta-D-galactosyl-(1->3)-[alpha-
L-fucosyl-(1->4)]-N-acetyl-beta-D-glucosaminyl-R.
      CARBOHYD
CARBOHYD
CARBOHYD
VARIANT
                                                                                                                     DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires alicense agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P56434;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUR-2004 (Rel. 43, Last annotation update)
15-MaR-2004 (Rel. 43, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.65)
fucosyltransferase) (Fucosyltransferase 6) (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=98037800;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                      EMBL; Y14035; CAA74362.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A., AND VARIANTS LEU-124; GLU-172 AND ALA-192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pan troglodytes (Chimpanzee).
                                                                                                                                                                                                                                                                   InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_transF_10; 1.
Transferase; GlycosyTtransferase; Glycoprotein; Transmembrane;
Signal-anchor; Golgi stack; Polymorphism.
                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PATHWAY: Glycosylation.
SUBCELULIAR LOCATION: Type II membrane protein. Membrane-bound form in trans cisternae of Golgi (By similarity).
POLYMORPHISM: There are two alleles, A and B. Allele A has Pro 124, Gln-172 and Val-192. Allele B has Leu-124, Glu-172 and Alley.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: Belongs to the glycosyltransferase family 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PANTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNALEAWAVEVVLG-ESRSNYERFLFPD-AFIHVDDFQSFKDLARYLQELDXDHARYLSY 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R-PLKLGVVPVYYGSPSITDW---LPSNKSALLVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSL
         35
46
91
153
184
124
                                                                                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=9368041;
         359
46
91
153
184
124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---ETLRPRSFSWAL------
                                                                                                                                                                                                                                           Polymorphism.
CYTOPLASMIC (POTENTIAL)
         LUMENAL,
N-LINKED
N-LINKED
N-LINKED
N-LINKED
P->L(ii
                                                                                                                                                                                                               SIGNAL-ANCHOR (TYPE-II MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                   POTENTIAL)
CATALYTIC (POTENTIAL).

D (GLCNAC. .) (POTENTIAL)

D (GLCNAC. .) (POTENTIAL

D (GLCNAC. .) (POTENTIAL

D (GLCNAC. .) (POTENTIAL

D (GLCNAC. .) (POTENTIAL

Cin allele B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5) (Galactoside 3-L-
(FUCT-VI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - AF-CKACWKLQEESRYQTRGI
                                                                    (POTENTIAL)
                                           (POTENTIAL)
                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                     PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          212
```

```
RESULT 6
FUT5_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E E SS
              Query Match
Best Local S
Matches 96
                                                                                                                                                                                                                                                                                                           SIQUENCE FROM N.A.

SIQUENCE FROM N.A.

TISSUE=Peripheral blood leukocytes;

MEDLINE=92156161; PubMed=1740457;

Weston B.W., Nair R.P., Larsen R.D., Lowe J.B.;

Weston B.W., Nair specific larsen R.D., Lowe J.B.;

"Isolation of a novel human alpha (1,3) fucosyltransferase molecular comparison to the human Lewis blood group alpha (1,3/1,4) fucosyltransferase gene. Syntenic, homologous, no (1,3/1,4) fucosyltransferase with distinct acceptor substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUTS HUMAN STANDARU;

Q11128;

Q1-0CT-1996 (Rel. 34, Created)

O1-OCT-1996 (Rel. 34, Last sequence update)

10-OCT-2003 (Rel. 42, Last annotation update)

10-OCT-2003 (Rel. 42, Last annotation update)

Alpha-(1,3)-fucosyltransferase (EC 2.4.1.65)

Alpha-(1,3)-fucosyltransferase (FC 2.4.1.65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VARIANT
VARIANT
SEQUENCE
J. Biol. Chem. 270:20112 20114 3. Biol. Chem. 270:20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 20114 2011
                                                                                                              SEQUENCE FROM N.A.
TISSUE=COLON, Kidney, and Liver;
TISSUE=COLON, Kidney, and Liver;
MEDLINE=95378269; PubMed=7650030;
Cameron H.S., Szczepaniak D., Weston B.W.;
"Expression of human chromosome 19p alpha(
genes in normal tissues. Alternative splic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                          isoforms."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87 SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LTTQYLESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDFPSDRDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRH----SHLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RYLSYFRWR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LYEAYVEWKLKGEISNQRLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YYQSLQAHLKVDVYGR--SHKPLPQ------GTWMETLSRYKFYLAFENSLHPDYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIMSYRSDSDIFTPYGWLQPWSGQPVHPPLNLSAKTEL----VAWAVSNWGPNSARVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS---AQLPRSPRRQGQRWIWFSMESPSN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIPLILLWIWPENKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KGL 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TEKLWRNALEAWAVPVVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TEXFWR-PLKLGVVPVYYGSPSITDW----LPSNKSAILVSEFSHPRELASYIRRLDSDDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            172
192
359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                 270:20112-20122(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    172 C
192 V
41892 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 254; DB 1;
Pred. No. 9.7e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 9.7e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -> E (in allele : -> A (in allele : 207C3DC29B2BFDD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (in allele
(in allele
              ,3 glycosidic X/SSEA-1 and
                                                                                                                   alpha(1,3)-fucosyltransferase
splicing, polyadenylation, ax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5) (Galactoside
 (FUCT-V).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
              linkages involved
sialyl Lewis X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ·AF-CKACWKLQEESRYQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----CRHLEALDGYFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104;
                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    255
```

```
RESULT 7
FUT5_PANTR
ID FUT5_PANTR
                                                                                  g
                                                                                                      S
                                                                                                                                          D,
                                                                                                                                                                   8
                                                                                                                                                                                                      ₽,
                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IM, 136835;
-
30; GO:0008417; F:fucosyltransferase activity; TAS.
30; GO:0008477; F:fucosyltransferase activity; TAS.
30; GO:0005975; P:carbohydrate metabolism; TAS.
InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_transf_10; 1.
Transferase; Glycosyltransferase; Glycoprotein; Transmembrane;
Signal-anchor; Golgi stack.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; M81485; AAA98117.1; -.
EMBL; U27329; AAC50188.1; -.
EMBL; U27330; AAC50189.1; -.
EMBL; A42270; A42270.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antigens.

CATALYTIC ACTIVITY: GDP-beta-L-fucose + beta-D-galactosyl-(1->3)-
N-acetyl-D-glucosaminyl-R = GDP + beta-D-galactosyl-(1->3)-[alpha-
L-fucosyl-(1->4)]-N-acetyl-beta-D-glucosaminyl-R.

L-fucosyl-(1->4)]-N-acetyl-beta-D-glucosaminyl-R.

PATHWAY: Glycosylation.

SUBCELLULAR LOCATION: Type II membrane protein. Membrane-bound form in trans cisternae of Golgi.

TISSUB SPECIFICITY: LIVER, COLON AND TESTIS AND TRACE AMOUNTS IN T-CELLS AND BRAIN.

SIMILARITY: Belongs to the glycosyltransferase family 10.
                                                                                  333
                                                                                                              358
                                                                                                                                             275
                                                                                                                                                                          302
                                                                                                                                                                                                       227
                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                      173
                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                 138
                                                                                                                                                                                                                                                                                                                                                                                             78
                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                            94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGNC:4016; FUT5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                            VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQ
                                                                                                                                                                                                                                MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW
                                                                                                                                                                                                                                                                                                LESIEVLKSLRYLVP-----LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL
                                                                                                                                                                                                       QAHLKVDVYGR--SHKPLPK------GTMMETLSRYKFYLAFENSLHPDYITEKLW
                                                                                                                                                                                                                                                                                                                                 LP--PPTRPQGQRWIWFSMESPSN-----
                                                                                                                                          RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY
                                                                                                                                                                      R-PLKLGVVPVYYGSPSITDW----LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY
                                                                                                                                                                                                                                                                   RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL----VAWAVSNWKPDSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                               IDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRH-----SHLPLTTQY
                                                                                                                                                                                                                                                                                                                                                                                                                          IMLWWSPLTGETGRLGQC-----GADACFFTINRT-----YLHHHMTKAFLFYGTDFN
                                                                                                                                                                                                                                                                                                                                                                                             ILLWTWPFNTPVA-LPRCSEMVPGAADCNITADSSVYPQADAVIVHHWD---IMYNPSAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35
60
105
167
198
374
                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.4%;
nilarity 26.6%;
Conservative 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
60
105
167
198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 245.5; DB 1;
Pred. No. 4.9e-12;
2; Mismatches 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LUMENAL, CATALYTIC (POTENTIAL).

N.LINKED (GLCNAC...) (POTENTI

N.LINKED (GLCNAC...) (POTENTI

N.LINKED (GLCNAC...) (POTENTI

N.LINKED (GLCNAC...) (POTENTI

N.LINKED (GLCNAC...) (POTENTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL).
SIGNAL-ANCHOR (TYPE-II N
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TYPE-II MEMBRANE PROTEIN)
                                                                                -CKACWKLQQESRYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                 -CRHLEALDGYFNLTMSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                              409
                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                             133
                                                                                                                                                                                                       274
                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                    226
                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                 172
                                                                                                                                                                                                                                                                                                                                                               192
                                                                                                                                                                                                                                                                                                                                                                                                                            137
                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                 밁
                                                         Ş
                                                                                            망
                                                                                                                   S
                                                                                                                                                         밁
                                                                                                                                                                                   Š
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                             DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
                                                                                              173
                                                                                                                             193
                                                                                                                                                           134
                                                                                                                                                                                                                      78
                                                                                                                                                                                                                                                                                   93;
                                                                                                                                                           LP--PPTRPQGQRWIWFSMESPSN--
                                  QAHLKVDVYGR--SHKPLPQ-
                                                              MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW
                                                                                            RSDSDIFTPYGWLQPWSGQPVHPPLNLSAKTEL-
                                                                                                                             LESIEVLKSLRYLVP-----
                                                                                                                                                                                        IDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRH----SHLPLTTQY
                                                                                                                                                                                                                    ILLWTWPFNTPVA-LPRCSEMVPGAADCNITADSNVYPQADAVIVHHWD---IMYNPSAN
```

STANDARD;

PRT;

374 Å

R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY

-GTMMETLSRYKFYLAFENSLHPDYITEKLW

-LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL

---CRHLEALDGYFNLTMSY

172 192 133

241

--VAWAVŚNWGPNŚARVRYYQSL

```
A COUNTY AND DOUGHOUS COUNTY AND SOLUTION OF THE FEBRUAR OF THE FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RX MEDINE-98037800; PubMed-9368041;
RC Costache M., Apoil P.-A., Cailleau A., Elmgren A., Larson G.,
Costache M., Apoil P.-A., Cailleau A., Criol R., Mollicone R.;
RA Henry S., Blancher A., Iordachescu D., Oriol R., Mollicone R.;
RT "Evolution of fucosyltransferase genes in vertebrates.";
J. Biol. Chem. 272:29721-29728(1997).
CC -!- FUNCTION: May catalyze alpha-1, 3 glycosidic linkages involved in CC the expression of VIM-2, Lewis X/SSBA-1 and sialyl Lewis X
CC antigens (By similarity).
CC --- CATALYTIC ACTIVITY: GDP-beta-L-fucose + beta-D-galactosyl-(1->3)-CC N-acetyl-D-glucosaminyl-R = GDP + beta-D-galactosyl-(1->3)-CC L-fucosyl-(1->4)]-N-acetyl-beta-D-glucosaminyl-R.
CC --- SUBCELLULAR IOCASTION: Type II membrane protein. Membrane-bound CC --- SUBCELLULAR IOCASTION: Type II membrane protein. Membrane-bound CC ---- SUBCILARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a obetween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and is entitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; Y14034; CAA74361.1; -.
InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_transf_10; 1.
Transferase; Glycosyltransferase; Glycoprotein; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.65)
fucosyltransferase) (Fucosyltransferase 5) (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                            .gnal-anchor;
90 IMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYGTDFN
                                                                                      Similarity
                                                                                                                                                                            374
                                                                                                                                                                                                                                   35
60
105
167
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                 16
                                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Golgi
                                                                                                                                                                                                        374
60
105
167
198
                                                                                                                                                                            43034 MW;
                                                                                      9.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                            stack.
                                                          40;
                                                                                                                                                                                                     LUMENAL, ON LINKED N-LINKED N-LINKED N-LINKED N-LINKED
                                                       Score 244.5; DB 1
Pred. No. 5.8e-12;
0; Mismatches 120
                                                                                                                                                                                                                                                                                                                                                                                 CYTOPLASMIC (E
SIGNAL-ANCHOR
                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                            3F35DEE8A8F1A2E2 CRC64;
                                                                                                                                                                                                        (GLCNAC. ..) (POTENTIAL)
(GLCNAC. ..) (POTENTIAL)
(GLCNAC. ..) (POTENTIAL)
(GLCNAC. ..) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                       CATALYTIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                              OR (TYPE-II)
                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5) (Galactoside (FUCT-V).
                                                             120;
                                                       Indels 101;
                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                 MEMBRANE PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
; Pan.
                                                                                                                                                                                                                                                                                              (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 restrictions
                                                                                                                 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3-L-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   outstation
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
   137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        way
                                                          18
```

```
RESULT OF SECURITY OF SECURITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  日
                                                                                                                                                                                                                                                                                                                                                                                                                                                  [4]

VARIANT LE(-) MET-105.

WEDLINE-94059067; PubMed-8240322;

MEDLINE-94059067; L., Larson G.;

"Genotypic heterogeneity among Lewis negative individuals.";

"Genotypic heterogeneity among Lewis negative individuals.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rahim I., Schmidt L.R., Wahl D., Drayson E., Masla Stranahan P.L., Pettijohn D.E.; "Isolation and expression of human alpha (1,3/1,4) fucosyltransferase."; Submitted (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         embryonic antigen and the Lewis blood group alpha (1,3/1,4) fucosyltransferase.";

Genes Dev. 4:1288-1303(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TUT3 HUMAN STANDARD; PRT; 361 AA.
P21217; Q99448; Q99449;
01-MAY-1991 (Rel. 18, Created)
01-MAY-1991 (Rel. 18, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation update)
Galactoside 3(4)-L-fucosyltransferase (EC 2.4.1.65) (Blood alpha-4-fucosyltransferase) (Lewis FT) (Fucosyltransferase
                                                                    MEDLINE=94033579; PubMed=8219240;
Koda Y., Kimura H., Mekada E.;
"Analysis of Lewis fucosyltransferase c
mucosa of Lewis-positive and -negative
plood 82:2915-2919(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cameron H.S., Szczepaniak D., Weston W.; "Expression of human chromosome 19p alpha(1,3)-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMAN
                                                                                                                                                                                                                                                                                                                                                Nishihara S.,
Narimatsu H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95378269; PubMed=7650030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=91032981; PubMed=1977660;
Kukowska-Latallo J.F., Larsen R.D.,
"A cloned human cDNA determines exp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                      VARIANTS LE(-)
                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=94059082; PubMed=8240337;
                                                                                                                                                                                                                                                                                                                                                                                                                          VARIANTS LE(-) ARG-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ω</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            isoforms.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                          /ARIANTS LE(-)
                                                                                                                                                                                                                                                                              .ndividuals.";
                                                                                                                                                                                                                                                                                                Alpha (1,3/1,4)fucosyltransferase single amino acid substitution in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OR LE OR FT3B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in normal tissues. Alternative
                                                                                                                                                                                                                                                   Biophys. Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VEWKLKGEISNQRLLTALRER -- KWGVQDVNQDNYIDAFECMVCTKVWANIRLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRWR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (FEB-1999) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                             Yazawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     270:20112-20122(1995).
                          ARG-20
                                                                                                                                                                                                   ARG-20 AND SER-170.
3-20 AND LYS-356
PubMed=8063716;
                                                                                                                                                                                                                                                                                                                                                                          S., Iwasaki H., Nakazato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---ETLRPRSFSWALD-------
                                                                                                                                                                                                                                                   Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                             SER-170 AND ALA-336.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                   196:624-631(1993)
                                                                                                                                                                                                                                                                                                   (FucT-III) gene is
1 Lewis histo-blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  splicing, polyadenylation,
                                                                                                    genes from the human
e individuals.";
                                                                                               individuals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E., Maslanik
                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lowe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -- FCKACWKLQQESRYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mouse stage-specific
                                                                                                                                                                                                                                                                                                                                                                             Kudo
                                                                                                                                                                                                                                                                                                inactivated type negativ
                                                                                                                                                                                                                                                                                                                                                                          .
                                                                                                                                                                                                                                                                                                tivated by negative
                                                                                                                                                                                                                                                                                                                                                                          Ando
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   group Lewis
3) (FUCT-
                                                                                                                         gastric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              332
```

```
RA Pang H., Liu Y., Koda Y., Soejima M., Jia J., Schlaphoff T.,
RA du Toit E.D., Kimura H.;
RY "Five novel missense mutations of the Lewis gene 'FUT3' in African
RT "Five novel missense mutations in South Africa.";
RT "Five novel missense mutations in South Africa.";
RT "Yosas' and Caucasian populations in South Africa.";
RT Hum. Genet. 102:675-680(1998).
CC :- FUNCTION: MAY CATALYZE ALPHA-1,3 AND ALPHA-1,4 GLYCOSIDIC LINKAGES
CC :- FUNCTION: MAY CATALYZE ALPHA-1,3 AND ALPHA-1,4 GLYCOSIDIC LINKAGES
CC :- FUNCTION: MAY CATALYZE ALPHA-1,3 AND ALPHA-1,4 GLYCOSIDIC LINKAGES
CC :- FUNCTION: MAY CATALYZE ALPHA-1,3 AND ALPHA-1,4 GLYCOSIDIC LINKAGES
CC :- GROUP LEWIS EXPRESSION OF VIM-2, LEWIS B, SIALYL
CC HAVE AN ACTIVE ENZYME WHILE LEWIS-NEGATIVE (LE(+)) INDIVIDUALS
CC HAVE AN INACTIVE ENZYME.
CC :- CATALYTIC ACTIVITY: GDP-beta-L-fucose + beta-D-galactosyl-(1->3)-(alpha-
CC :- CATALYTIC ACTIVITY: GDP-beta-L-fucose + beta-D-galactosyl-(1->3)-(alpha-
CC :- CATALYTIC ACTIVITY: GDP-beta-D-glucosaminyl-R.
CC :- SUBCELLULAR LOCATION: Type II membrane protein. Membrane-bound
CC :- SUBCELLULAR LOCATION: Type II membrane protein. Membrane-bound
CC :- SUBCELLULAR LOCATION: Type II membrane protein. Membrane-bound
CC :- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN STOMACH, COLON, SMALL
INTESTINE, LUNG AND KIDNEY AND TO A LESSER EXTENT IN SALIVARY
CC GLAND, BLADDER, UTERUS AND LIVER.
CC :- MISCELLANEOUS: Also acts on the corresponding 1,4-galactosyl
derivative, forming 1,3-L-fucosyl transferase family 10.

-- SIMILARITY: Belongs to the glycosyltransferase family 10.
EMBL; X53578; CAA37641.1; -.
EMBL; U27328; AAC50185.1; -.
EMBL; U27327; AAC50185.1; -.
EMBL; U27327; AAC50186.1; -.
EMBL; D89327; BAA13942.1; -.
EMBL; D89325; BAA13942.1; -.
EMBL; AF131913; AAD33514.1; -.
                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a clotheen the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Harrington J., Larson G.;
"Significance of individual point mutations, human Lewis 'FUT3' gene for expression of Levalpha'1,3/1,4'-fucosyltransferase, Fuc-TIII."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VARIANTS LE(-) ARG-20; ARG-68; MEMBLINE=96243526; PubMed=8801770; Elmgren A., Boerjeson C., Svenss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=95050753; PubMed=7961897;
Nishihara S., Narimatsu H., Iwasaki H., Y
Ando T., Seno T., Narimatsu I.;
"Molecular genetic analysis of the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mollicone R., Reguigne I., Kelly R.J., Fletcher A., Watt J., Chattield S., Aziz A., Cameron H.S., Weston B.W., Lowe J.B., "Molecular basis for Lewis alpha(1,3/1,4)-fucosyltransferase deficiency (FUT3) found in Lewis-negative Indonesian pedigree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VARIANTS LE(-) ARG-68 AND MET-105.
MEDLINE=97413801; PubMed=9268337;
Elmgren A., Mollicone R., Costache
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  group system.";
Vox Sang. 70:97-103(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=98366989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARG-223 AND MET-270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANTS LE(+) LYS-102 AND ALA-124,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA sequencing and screening FUT3' gene enables molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARIANT LE(-) LYS-356.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biol, Chem. 272:21994-21998(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Biol. Chem. 269:29271-29278(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269:20987-20994(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=9703429;
Koda Y., Soejima M., Jia J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R., Costache M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Svensson L., Ry
ening for point m
cular genotyping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MET-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fuc-TIII.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND VARIANTS LE(-) ASN-162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rydberg L., Larson G.;
t mutations in the human Lewis
ng of the human Lewis blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boerjeson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND LYS-356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yazawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lewis histo-blood group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antigens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             о
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Akamatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oriol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pedigrees.";
                                                                                                                                                                                                                                                                                                                                                                                                              restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C314T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oriol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                                                     outstation
                                                                                                                                                                                                                                                                                                                                                                                 no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
:
```

```
RESULT 9
FUT3_PANTR
ID FUT3_PANTR
                                             g,
                                                         δ
                                                                              망
                                                                                           S
                                                                                                                밁
                                                                                                                                S
                                                                                                                                                  망
                                                                                                                                                                  Ş
                                                                                                                                                                                      밁
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000
000
000
000
000
000
000
000
                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                     VARIANT
                                                                                                                                                                                                                                                                                                                                     VARIANT
                                                                                                                                                                                                                                                                                                                                                      VARIANT
                                                                                                                                                                                                                                                                                                                                                                       VARIANT
                                                                                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                           VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                            VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal-anchor;
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR; A36669; A36669.
Genew; HGNC:4014; FUT3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO:0005674; C:membrane fraction; TAS.
GO:0008641; F:fucosyltransferase activity;
GO:0008417; F:carbhydrate metabolism; TAS
                                             319
                                                                              261
                                                                                               301
                                                                                                                                 241
                                                                                                                                                  159
                                                                                                                                                                    192
                                                                                                                                                                                      113
                                                                                                                                                                                                     138
                                                                                                                                                                                                                       65
                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PF00852; Glyco
                                                                                                                                                                                                                                                                 Similarity
                                                                                       WR-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEA
                                                                                                                              LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF
                                                             YVEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQ
                                                                                                               LQAHLKVDVYGR--SHKPLPK-----GTWMETLSRYKFYLAFENSLHPDYITEKL
                                                                                                                                                                                                    IDS-----LPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQ 191
                                                                              WRNALEAWAVPVVLG-PSRSNYERFLPPD-APIHVDDFQSPKDLARYLQELDKDHARYLS
                                                                                                                                                 YRSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWKPDSARVRYYQS
                                                                                                                                                                   YLESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE
                                                                                                                                                                                     IMSNPKSRLPPSPRPQGQRWIWFNLEPPPNCQHL--EALDRYFN-----LTMS
                                                                                                                                                                                                                      ILLWTWPFHIPVA-LSRCSEMVPGTADCHITADRKVYPQADTVIVHH---
                                                                                                                                                                                                                                       IMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHMTKAFLFYGTDFN 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR001503; Glyco_trans
1852; Glyco_transf_10; I
                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                       223
                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                            105
                                                                                                                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35
154
185
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12; Glyco transf 10; 1.
Glycosyltransferase; Glycoprotein; Transmembrane; 2r; Golgi stack; Polymorphism; Blood group antigen.
CYTOPLASMIC (POTENTIAL)
15
CYTOPLASMIC ("MONTHE POTENTIAL)
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              68
                                                                                                                                                                                                                                                                                           ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
154
185
20
                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                       223
                                                                                                                                                                                                                                                                                                                                                                                         170
                                                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                            105
                                                                                                                                                                                                                                                                                                                                                                                                                                                           102
                                                                                                                                                                                                                                                                                           42117 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                 9.1%;
26.5%;
                                                                                                                                                                                                                                                        43;
                                                                                                                                                                                                                                                                                                                                                                                                                       /FTId=VAR 007960.
T -> M (IN LE(-)).
/FTId=VAR 003427.
S -> A (IN LE(+)).
                                                                                                                                                                                                                                                                 Score 239.5; DB 1
Pred. No. 1.4e-11;
                                                                                                                                                                                                                                                                                                                                                             G -> S (IN
/FTId=VAR
G -> R (IN
/FTId=VAR
                                                                                                                                                                                                                                                                                          /FTId=VAR_003430.
BF4398044F19C284
                                                                                                                                                                                                                                                                                                                  /FTId=VAR_003429.
I -> K (IN LE(-); LESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LUMENAL, CATALYTIC (POTENTIAL).
N-LINKED (GLCNAC. . .) (PROBABLE)
N-LINKED (GLCNAC. . .) (PROBABLE)
                                                                                                                                                                                                                                                                                                           IN ACTIVITY)
                                                                                                                                                                                                                                                                                                                                                                                                 /FTId=VAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL-ANCHOR (TYPE-II MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                        /FTId=VAR 007961
D -> N (IN LE(-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /FTId=VAR 007959.
Q -> K (IN LE(+)).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /FTId=VAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL)
                                                                                                                                                                                                                                                                                                                                     TId=VAR 007964.
                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                    d=VAR_007963. M (IN LE(-)).
                                                                                                                                                                                                                                                                                                                                                                     d=VAR_003428.
R (IN LE(-)).
                                                                                                                                                                                                                                                                                                                                                                                    d=VAR 007962.
S (IN LE(-); COMPLETELY INACTIVE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R (IN LE(-)).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R (IN LE(-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLCNAC. . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       003426
                                                                                                                                                                                                                                                        115;
                                                                                                                                                                                                                                                                        ۲.
                                                                                                                                                                                                                                                                                           CRC64;
                                             FCKACWKLQQESRYQ
                                                                                                                                                                                                                                                       Indels 103;
                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                    THAN 10% REDUCTION
                                                                                                                                                                                                                                                                         361;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEIN)
                                                                                                                                                                                                                       -----WD
                                                                                                                                                                                                                                                       Gaps
                                             351
                                                             409
                                                                                               356
                                                                                                                                                                    240
                                                                                                                                                                                                                       112
                                                                              318
                                                                                                                                  300
                                                                                                                                                  212
                                                                                                                                                                                     158
                                                                                                                260
             Ş
                                  밁
                                                  Ş
                                                                    뮍
                                                                                   Ş
                                                                                                                                          Query Match
Best Local S
Matches 92
                                                                                                                                        VARIANT
VARIANT
SEQUENCE
                                                                                                                                                                  DOMAIN
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9598;
                                                                     76
                                                                                     90
                                                                                                        92;
                                                                                                                Similarity
                                                    IDSTPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIE
                                                                     ILLWTWPFHIPVA-LSRCSEMVPGAADCHITADRKVYPQADAVIVHHWD---IMYNPKSR
                                                                                     IMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYGTDFN
                                                                                                                                                          35
165
196
162
                                                                                                                                         ΑA;
```

STANDARD;

PRT;

372

ΑA

В

IFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWKLDSARVRYYQSLQAHLK

229

LOSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIE

-EALDRYFN

197

131

175

```
RA COSTGALE M., Apoil P.-A., Calleau A., Elmgren A., Larson G.,
RA Henry S., Blancher A., Iordachescu D., Oriol R., Mollicone R.;
RT "Evolution of fucosyltransferase genes in vertebrates.";
RT "Evolution of fucosyltransferase in vertebrates.";
RT "Evolution of fucosylt linkages in vertebrates."
CC -!- FUNCTION: May catalyze alpha-1,3 and alpha-1,4 glycosidic linkages
CC (-!- Syntharic) application of sialyl Lewis X/SSEA-1
CC (-!- SUBCILULAR LOCATION: Type II membrane protein. Membrane-bound
CC -!- FOLYMORPHISM: There are two alleles, A and B. Allele A has Arg-
CC -!- POLYMORPHISM: There are two alleles, A and Met-304.
CC -!- SUBCELLULANEOUS: Also acts on the corresponding 1,4-galactosyl
CC -!- SINLIARITY: Belongs to the glycosyltransferase family 10.
CC -!- SINLIARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001503; Glyco trans 10.
Pfam; PF00852; Glyco transf 10; 1.
Transferase; Glycosyltransferase; Glycoprotein; Transmembrane;
Signal-anchor; Goldi stack; Polymorphism.
DOMAIN 1 14 CYTOPLASMIC (POTENTIAL).
TRANSMEM 15 34 SIGNAL-ANCHOR (TYPE-II MEMBRANE P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Galactoside 3(4)-L-fucosyltransferase (EC 2.4.1.65) (Blood alpha-4-fucosyltransferase) (Lewis FT) (Fucosyltransferase III) (Alpha-3/4-fucosyltransferase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; Y14033; CAA74360.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., AND VARIANTS MEDLINE=98037800; PubMed=9368041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
   Conservative
                                                                                                                                                                        372
165
196
162
304
                                                                                                                                       43233 MW;
                                8.9%;
   43;
                                                                                                                                                                (POTENTIAL).
LUNENAL, CATALYTIC (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTII
N-LINKED (GLCNAC. . .) (POTENTII
R -> G (in allele B).
V -> M (in allele B).
Score 234.5; DB
Pred. No. 3.6e-11
3; Mismatches 12
                                                                                                                                          649CBF8BCA7BD74C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLY-162 AND MET-304
                                                                 DB 1;
   Indels
                                                              Length 372;
                                                                                                                                                                                                                                                 (POTENTIAL).
                                                                                                                                                                                                                                                                                 (POTENTIAL)
   91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        group Lewis
3) (FUCT-
                                                                                                                                                                                                                                                                                                                                                                                    PROTEIN)
   Gaps
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUT7 MOUSE
Q11131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith P.L., Gersten K.M., Petryniak B., Kelly R.J., Rogers C., Natsuka Y., Alford J.A. III, Scheidegger E.P., Natsuka S., Lowe J.B.; "Expression of the alpha(1,3) fucosyltransferase fuc-TVII in lymphoid aggregate high endothelial venules correlates with expression of Legisletin ligands.";
MGD; MGI:107692; Fut7.
InterPro; IPR001503; Glyco trans 10.
Pfam; PF00852; Glyco_transf_10; I.
Transferase; Glycosyltransferase; Transmembrane; Glycoprotein; Signal-anchor; Golgi stack; Alternative splicing.
                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
10-OCT-2003 (Rel. 34, Last annotation update)
10-OCT-2003 (Rel. 42, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.-) (Galactos fucosyltransferase) (Fucosyltransferase 7) (FUCT-VII)
                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=96215226; PubMed=8626519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=NIH Swi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOUSE
                                                                                          EMBL; U45980; AAC52484.1; -. EMBL; U45980; AAC52485.1; -.
                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biol. Chem. 271:8250-8259(1996).

Biol. Chem. 271:8250-8259(1996).

FUNCTION: May catalyze alpha-1,3 glycosidic linkages involved in the expression of sialyl Lewis X antigens.

CATALYTIC ACTIVITY: GDP-L-fucose + alpha-2,3-Neu-N-acetyl-1,4-beta-D-galactosyl-N-acetyl-D-glucosaminyl-R = GDP + alpha-2,3-Neu-N-acetyl-1,4-beta-D-galactosyl-(alpha-1,3-L-fucosyl)-N-acetyl-D-glucosaminyl-R.

acetyl-D-glucosaminyl-R.

acetyl-D-glucosaminyl-R.

BATHWAY: Glycosylation.

SUBCELULAR LOCATION: Type II membrane protein. Membrane-bound form in trans cisternae of Golgi.

ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                  SIMILARITY: Belongs to the glycosyltransferase family 10
                                                                                                                                                                                                                                                                                                                                                             TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          247
                                                                                                                                                                                                                                                                                                                                         IsoId=Q11131-2; Sequence=VSP_001781;
SSUE SPECIFICITY: HIGHLY EXPRESSED IN LUNG AND BONE MARROW AND
A MUCH LESSER EXTENT IN SPLEEN, SALIVARY GLAND AND SKELETAL
                                                                                                                                                                                                                                                                                                                                                                                                                 IsoId=Q11131-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM N.A. (ISOFORMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKL 362
                                                                                                                                                                                                                                                                                                                                       MUCH LESSER EXTENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSYFRWR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VDVYGR--SHKPLPK------GTMMETLSRYKFYLAFENSLHPDYITEKLWRNALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLK 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --ETLRPRSFSWALD------FCKACWKLQQESRYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Galactoside
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ń
```

```
RESULT 11

FU13 ARATH STANDARD; PRT; 401 AA.

ID FU13 ARATH STANDARD; PRT; 401 AA.

AC Q9C8W3; Q8RYC1;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DT 28-FEB-2003 (Rel. 40, Last sequence (RETU13).

CR ARATIN-CV. Crimpila; Trisute-prophyta; Embryophyta; Tradice annotation update)
CR ARAIN-CV. Columbia; Trisute-part annotation update)
RT Momologues from Arabidopsis thaliana.";
RT Homologues from Arabidopsis thaliana.";
RT Homologues from Arabidopsis thaliana.";
RT SEQUENCE FROM N.A.
COLUMBIA;
CR MEDILNE-21016719; PubMed-11130712;
RT MEDILNE-21016719; PubMed-11130712;
RT Medilne-C., Alonso J., Altafi H., Araujo R., Bowman C.L., RA
White O., Alonso J., Altafi H., Araujo R., Bowman C.L., RA
White O., Alonso J., Altafi H., Araujo R., Bowman C.L., RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
CARBOHYD
CARBOHYD
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
      SEQUENCE FROM N.A.
STRAIN=cv. Columbia;
MEDLINE=21016719; PubMed=11130712;
Theologis A., Ecker J.R., Palm C.J., Federspiel N.A.,
White O., Alonso J., Altafi H., Araujo R., Bowman C.L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
87; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DFNIDSLPLPRKAH-HDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ILIWHWPFTNRPPELPGDTCTRYGMASCRLSANRSLLASADAVVFHHRELQTRQSL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLGDWRER-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----LPLDQRPHGQPWVWASMESPSNTHGL-HR-FRGIFNWVLSYRRDSDIFVPYGRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMLWWSPLTGETGRL-----GOCGADACFFTINRTYL------HHH--MTKAFLFYGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LITALRERKWGVQDVNQDNYIDAFECMVCTK 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LGPPRATYEAFVPPD-AFVHVDDFSSARELAVFL--VSMNESRYRGFFAWRDRLRV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EPLSGPTS----PLPAKSRM-----AAWVISNFQERQQRAKLYRQLAPHLQVDVFGRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÃĀ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 389
261
368
128
338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SGRPLCANCLLPTLARYRFYLAFENSQHRDYITEKFWRNALAAGAVPVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.9%;
26.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
LUMENAL, CATAL
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 233.5; DB 1
Pred. No. 4.6e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL)
MPTPCPPACLSTPGTHRLLPFPDWKAPSWESEKEATCNSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC (POTENTIAL).
SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PGPWAEPTVQ -> MNCI (in isoform /FTId=VSP_001781. 118FC6BZ378B99C6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----FCTICAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATALYTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                  ,3-fucosyltransferase
                                                                                                                                                                                                      Altmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                        a; Tracheophyta; eudicots; rosid
                                                                                                                                                                                                                                                                                                                                                                                                                                       (Galactoside
              Brooks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389;
                                                                                                                                                                                                    'я)
'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             75;
                                ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2)
                                                                                                                                                                                                                                                                                                                                            rosids;
                                                                                                                                                                                                        Mucha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151
```

338 341 398 387

```
Š
          밁
                                                                                                  밁
                                                                                                                                          Ş
                                                                                                                                                                                          B
                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RA Buehler E., Chan A., Chao Q., Chen H., Cheuk R.F., Chin C.W.,
RA Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,
RA Dunn F., Etgu P., Feldblyum T.V., Feng J.-D., Fong B., Fujii C.Y.,
RA Gill J.E., Goldsmith A.D., Haas B., Hansen N.F., Hughes B., Huizar L.,
RA Hinter J.L., Jenkins J., Johnson-Hopson C., Khan S., Khaykin E.,
RA Kim C.J., Koo H.L., Kremenetskaia I., Kurtz D.B., Kwan A., Lam B.,
RA Kim C.J., Koo H.L., Kremenetskaia I., Kurtz D.B., Kwan A., Lam B.,
RA Hangin-Hooper S., Lee A., Lee J.M., Lenz C.A., Li J.H., Li Y.-P.,
RA Hill S.X., Liu Z.A., Luros J.S., Maiti R., Marziali A.,
RA Militscher J., Miranda M., Nguyen M., Nierman W.C., Ogborne B.I.,
RA Militscher J., Miranda M., Nguyen M., Nierman W.C., Ogborne B.I.,
RA Pai G., Peterson J., Pham P.X., Rizzo M., Roney T., Rowley D.,
RA Sun H., Tallon L.J., Tambunga G., Toriumi M.J., Town C.D.,
RA Sun H., Tallon L.J., Tambunga G., Toriumi M.J., Town C.D.,
RA Wu D., Yu G., Fraser C.M., Venter J.C., Davis R.W.,
"Sequence and analysis of chromosome 1 of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wu D., Yu G., "Sequence and thaliana.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nature 40
[3]
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AY026941; AAK1
PIR; H96742; H96742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AJ404862; CAC38049.1; -.
EMBL; AC021665; AAG52222.1; ALT_INIT.
EMBL; AY026941; AAK11728.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_transf_10; T.
Transferase; Glycosyltransferase; Transmembrane;
Signal-anchor; Golgi stack; Cell wall.
                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SILIQUES.
SIMILARITY: Belongs to the glycosyltransferase family CAUTION: It is uncertain whether Met-1 or Met-9 is the caution.
          132
                                                     114
                                                                                                                                                                                                                                                                                                103;
                                                                                                     96
                                                                                                                                                                                                36
                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       408:816-820(2000)
                                                                                                                                                                                                                                                                                                                 Similarity
          WT--KSSVLADSPDALLFETT
                                                     FTINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHE---
                                                                                                     CGKLKMK---
                                                                                                                                                                                             SMEHSIDPEPKLSDSTSDPFSDVLVAYKKWDFEVGCARFRENHKDAILGNVSSGSLQEFG
                                                                                                                                                                                                                                          SMQCFNDQWPLSNTRSSEHIKEVMVELGKFE-----RKEFK-----SSSLQD--
                                                                                                                                                  -GHTKMEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACF
                                                                                                                                                                                                                                                                                                                                                                                          401
                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ın ⊢
                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                        401
. 85
45098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27
27
                                                                                                                                                                                                                                                                                                               8.8%;
                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                                                                                                                                                                                          60;
                                                                                                                                                                                                                                                                                        Score 230; DB
Pred. No. 9.1e.
50; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
LUMENTA, CATALYTIC (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENT)
, E2DB2B48550C36D6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYTOPLASMIC (POTENTIAL).
SIGNAL-ANCHOR (TYPE-II MEMBRANE
     -TPPLQRRVGDPLRVYMELEAGRKRSGREDIF---
                                                                                                                                                                                                                                                                                                                 DB 1;
.1e-11;
                                                                                                                                                                                                                                                                                             159;
                                                                                                                                                                                                                                                                                                                                     Length 401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glycoprotein;
                                                                                                  WIPDNLENLYSCROGM-TOL
                                                                                                                                                                                                                                                                                          Indels 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fleurat-Lessard P.,
                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is the initiator
                                                     - ESPKNNYKL FHKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GREEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene.";
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alpha-
                                                     169
                                                                                                  131
                                                                                                                                                                                             95
                                                                                                                                                                                                                                          54
                                                                                                                                                                                                                                                                                          19
  RESULT FUTT/HLT FUTT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                             SEQUENCE HITALT HITALT HITALT HITALT HITALT HITALT HIGH THE CHARACTERIZATION OF THE CHARACTERIZATION O
DISULFIDE BONDS.
MEDLINE=21319013; F
de Vries T., Yen T.
Knegtel R.M.A., Bur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Biol. [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=94327669; PubMed=8051184; Natsuka S., Gersten K.M., Zenita K., K "Molecular cloning of a cDNA encoding alpha-1,3-fucosyltransferase capable o Lewis x determinant.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE-94266898; PubMed-8207002;
Natsuka S., Gersten K.M., Zenita K., K
"Molecular cloning of a cDNA encoding
alpha-1,3-ficosyltransferase capable o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUT7_HUMAN STANDARD; PRT; 342 AA.

Q11130;
Q107-1396 (Rel. 34, Created)
Q1-OCT-1996 (Rel. 34, Last sequence update)
Q1-OCT-2003 (Rel. 42, Last annotation update)
Q1-OCT-2003 (Rel. 42, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.-) (Galactoside 3-L-fucosyltransferase) (Fucosyltransferase 7) (FUCT-VII) (Selections)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LT 12
HUMAN
                                                                                                                                                                                                                                                               "Expression cloning of a novel alpha involved in biosynthesis of the sialy determinants in leukocytes.";
J. Biol. Chem. 269:14730-14737(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
Eukaryota; Metazoa; (
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                     Sasaki
                                                                                                                                                                                                                                                                                                                                                                 Hanai N.,
                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=94237894;
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REVISIONS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lewis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     igand synthase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                            i K., Kurata
N., Nishi T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  x determinant."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chem. 269:16789-16794(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ::
- CIXV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ELAAYVKRLGDDPVAYSEYHAWRRCGLMGNYGKTRAVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ELASYIRRIDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFECMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHYKFVLAIENTAVESYVTEKLFYALDSGSVPIYFGASNVQDFVPPH-SVIDGSKFGSMQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AQYKFILAFENAVCDDYITEXFWRPLXLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DPPSDRDSYVRELMTYIEVDSYGECLRN-KDLPQQLK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VITLENYTATESRHSHLELTTQYLESIEVLKSLRYLVELQSKNKLRKRLAPLVYVQSD-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----ISYHAKDDVQTTYAGSL-FHNNRNYHISPHKNNDV-----
                                                                                                                                                                    Hiraiwa M., Kannagi R.;
selectin-ligand synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -HRDRLAKSLLDLIPHHSFGKCLNNVGGLDSALSMYPECVAEHNAEAKWYDHLHCAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269:20806-20806(1994).
     Bunschoten
                              T.Y.,
PubMed=11425803;
T.Y., Joshi R.K., Storm J.,
unschoten H., Joziasse D.H.,
                                                                                                                                                                                                                                                                                                                                                                      PubMed=8182079;
K Funayama K., Nagata M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Primates;
                                                                                                                      the
to
                                                                                                                      promoter.";
the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                               vel alpha 1,3-fucosyltransferase the sialyl Lewis x carbohydrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Kannagi R., Lowe
ng a novel human l
e of synthesizing
                                                                                                                                                                      (hFuc-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kannagi R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              novel human I
synthesizing
                                                                                                                                                                      VII)
                              van
       Macher
                                                                                                                                                                                                                                                                                                                                                                                     Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , Lowe J.B.,
luman leukocyte
ing the sialyl
                           Den
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lowe J.B.;
man leukocyte
                                                                                                                                                                    gene structure
     Bijnden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Buteleostomi;
; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                     [H]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Selectin-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -NPASMDADGFYRII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
B
                                                                                                                                                                                                                                                                                                                                                                                     Ohta
                                                                                                                                                                                                                                                                                                                                        that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -LVYWSSSRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -LDTLPCRL
                              D
                                                                                                                                                                                                                                                                                                                                                                                     ŝ
```

```
Ş
                                                                                                                                                                               밁
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                         뮍
                 8
                                                        밁
                                                                                  Š
                                                                                                                  밁
                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X78031; CAA54962.1; -.
EMBL; U11282; AAA20468.1; -.
EMBL; U08112; AAA56869.1; -.
EMBL; AB012668; BAA32819.1; -.
PIR; A54057; A54057.
Genew; HGNC24018; FUT7.
                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID CARBOHYD CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Neighboring cysteine engaged in disulfide be Glycobiology 11:423-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001503; Glyco_trans
Pfam; PF00852; Glyco_transf_10; ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0016021; C:integral to membrane; TAS.
GO; GO:0008417; F:fucosyltransferase activity; TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transferase; Glycosyltransferase; Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ighboring cysteine residues in human fucosyltransferase VII are aged in disulfide bridges, forming small loop structures."; cobiology 11:423-432(2001). FUNCTION: May catalyze alpha-1,3 glycosidic linkages involved in the expression of sialyl Lewis X antigens. CATALYTIC ARCIVITY: GDP-1-fucose + alpha-2,3-Neu-N-acetyl-1,4-beta-D-galactosyl-N-acetyl-D-glucosaminyl-R = GDP + alpha-2,3-Neu-N-acetyl-1,4-beta-D-galactosyl-(alpha-1,3-L-fucosyl).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-acetyl-D-glucosaminyl-R.

PATHWAY: Glycosylation:
SUBCELLULAR LOCATION: Type II membrane protein. Membrane-
form in trans cisternae of Golgi.
TISSUE SPECIFICITY: LEUKOCYTIC/MYELOID LINEAGE CELLS.
SIMILARITY: Belongs to the glycosyltransferase family 10.
245
                           303
                                                          196
                                                                                       244
                                                                                                                     147
                                                                                                                                                  184
                                                                                                                                                                                                            127
                                                                                                                                                                               89
                                                                                                                                                                                                                                         31
                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                       85
7:
                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                       YIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR- 302
                                                                                                                                                                               DAVVFHHRELQTRRSHLPLAQRPRGQPWVWASMESPSHTHGLSH--LRGIFNWVLSYRRD
                                                                                                                                                                                                           KAFLFYGTDFNIDSLPLP---RKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRH
                                                                                                                                                                                                                                                                     WELDSYP-----IMLWWSPLTGETGRL----GQCGADACFFTINRTYLHHHMT 126
ALVAGTVPVVLGPPRATYEAFVPAD-AFVHVDDFGSARELAAFLTGM--NESRYQRFFAW
                         PLKLGVVPVYYGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                                                                     SDIFVPYGRIE-----PHWGPSPPLPAKSRV----AAWVVSNFQERQLRARLYRQLAP
                                                                                                                                                 SHTETLLOATESIEATKSTEATANSOTAKKKKKKKTABTAAAOQQQQQBESQAQQAAQA
                                                                                                                                                                                                                                             WLLGSAPRGTPAPQPTITILVWHWPFTDQPPELPSDTCTRYGIARCHLSANRSLL--ASA 88
                                                                                                                                                                                                                                                                                                                                                                   342
                                                                                                                                                                                                                                                                                                                                                                                                37
68
211
318
81
291
161
                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15 F
                                                                                                                                                                                                                                                                                                                                                                   A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Golgi
                                                                                                                                                                                                                                                                                                                                                                                                342
76
214
321
81
291
162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                    39238 MW;
                                                                                                                                                                                                                                                                                                                     8.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stack.
                                                                                                                                                                                                                                                                                                       52; Mismatches
                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
N-LINKED
GP -> A (
RL -> SV
                                                                                                                                                                                                                                                                                                                     Score 224;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
LUMENAL, CATALYTIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                   D31BFF90DD64DFAB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.
                                                                                                                                                                                                                                                                                                                                                                                 KED (GLCNAC. ..) (POTENTIAL)
KED (GLCNAC. ..) (POTENTIAL)
A (IN REF. 1; AAA56869).
SV (IN REF. 1; AAA56869).
                                                                                                                                                                                                                                                                                                                       .2e-10
                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                       133; Indels
                                                                                                                                                                                                                                                                                                                                  Length 342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Membrane-bound
                                                                                                                                                                                                                                                                                                        54;
                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                   146
                                                                                                                                                    243
                                360
                                                           244
```

```
RESULT
FUT4_HU
유 성
                                                                                                                              EMBL; M65030; AAA92977.1; -
EMBL; M58596; AAA63172.1; -
EMBL; M58597; AAA63173.1; A:
EMBL; 865161; AAB20349.1; -
PIR; B36340; B36340.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-OCT-1996 (Rel. 34, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.-) (Galactos fucosyltransferase) (Fucosyltransferase 4) (FUCT-IV)
fucosyltransferase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
TISSUB-Peripheral blood leukocytes;
TISSUB-Peripheral blood leukocytes;
MEDLINE=91373370; PubMed=1716630;
Lowe J.B., Kukowska-Latallo J.F., Nair R.P., Lars
Macher B.A., Kelly R.J., Ernst L.K.;
"Molecular cloning of a human fucosyltransferase
expression of the Lewis x and VIM-2 epitopes but
cell adhesion.";
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-400 FROM N.A.

MEDILINE=92042084; PubMed=1718983;

Kumar R., Potvin B., Muller W.A., Stanley P.;

Kumar R., Potvin B., Muller W.A., Stanley P.;

"Cloning of a human alpha(1,3) -fucosyltransferase gene th

ELFT but does not confer ELAM-1 recognition on Chinese ha

cell transfectants.";

J. Biol. Chem. 266:21777-21783(1991).

-i- FUNCTION: May catalyze alpha-1,3 glycosidic linkages

the expression of Lewis X/SSEA-1 and VIM-2 antigens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUT4_HUI
P22083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goelz S.E., Hession C., Goff D., Griffiths B., 7 Chi-Rosso G., Lobb R.; "ELFT: a gene that directs the expression of an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUT4 OR ELFT.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAMOH
            MIM; 104230; -.
GO; GO:0005624; C:membrane fraction; TAS.
GO; GO:0005627; F:fucosyltransferase activity;
GO; GO:0005975; P:carbohydrate metabolism; TAS.
InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_trans_10;
                                                                                                                                                                                                                                    use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                      -i- PATHWAY: Glycosylation.

-i- SUBCELLULAR LOCATION: Type II membrane protein. Membrane-lform in trans cisternae of Golgi.

-i- SIMILARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cell 63:1349-1356(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=91084863; PubMed=1702034;
                                                                                                                   Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Biol. Chem. 266:17467-17477(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361 KLKGEISNORLITALRERKWGVQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302 RDRLRV---RLFTDWRERFCAICD
                                                                                                                HGNC:4015; FUT4.
Glycosyltransferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae;
                                                                                                                                                               ALT_INIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322
Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          405 AA
                                                                                                                                                                                                                                                                                      There are no restrictions on ong as its content is in no
                                                                                                                                                                                                                                                                                                                                                                                                            protein. Membrane-bound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Galactoside 3-L-
FUCT-IV) (ELAM-1 ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Larsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tizard R., Newman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ELAM-1 ligand.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
not E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Buteleostomi;
; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.D., Marks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ELAM-1-dependent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  that encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  involved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               determines
                                                                                                                                                                                                                                                                                                                                             a collaboration
                                                                                                                                                                                                                                                                                                                            outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R.м.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
```

```
FUT4_MOUSE
ID FUT4
AC Q1112
DT 01-00
DT 01-00
DT 10-00
DT 10-00
DT Alpha
DE fluces
GN FUT4
OC BUKar
OC Mamme
OC Mamme
OC Mamme
CN NCBI
RN GETSt
RA Hirai
RT COTTE
RA 12
RN [1]
RP SEQUI
RA 25
RN [2]
RD SEQUI
RA 25
RN [2]
RD SEQUI
RA 35
RN 35
RN [2]
RD SEQUI
RA 35
RN 35

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X F F F F F F F F X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 92
                                                                                                                                                                                                                                                                                                                                                  Q11127;
01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
10-0CT-2003 (Rel. 42, Last annotation update)
Alpha-(1,3)-fucosyltransferase (EC 2.4.1.-) (Galactoside fucosyltransferase 4) (FUCT-IV).
                                                                                                        Gersten K.M., Natsuka S., Trinchera M., Petryniak B., Kelly R.J., Hiralwa N., Jenkins N.A., Gilbert D.J., Copeland N.G., Lowe J.B., "Molecular cloning, expression, chromosomal assignment, and tissuespecific expression of a murine alpha-(1,3)-fucosyltransferase locus corresponding to the human ELAM-1 ligand fucosyl transferase.", J. Biol. Chem. 270:25047-25056(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
CONFLICT
SEQUENCE
                  MEDLINE=97037075; PubMed=8882722;
Ozawa M., Muramatsu T.;
                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                        FUT4 OR ELFT.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
CARBOHYD
                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=96027607; PubMed=7559635;
                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                      SEQUENCE FROM N.A. (ISOFORM SHORT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUT4_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Signal-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LFHKPVI-----TLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NYIDAFECMVCTKVWANIRLQEKGLPPK 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPVYYG--SPSITDWLPSNKSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --HSPGLRSLASNLFNWTLSYRADS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VLLWWEPFGGRDSAPRPPPDCPLRFNISG---CRLLTDRA--SYGEAQAVLFHHRDLVKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMLWWSPLTGETG------RLGQCGADACFFTINRTYLHHHMTKAFLFYGTDF---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IHVDDFPSASSLASYLLFLDRNPAVYRRYFHWRRSYAVH----ITSFWDEPW--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IGLLHTVARYKFYLAFENSQHLDYITEKLWRNALLAGAVPVVLGPDRANYERFVPRG-AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLSRKQGLVAWVVSHWDERQARVRYYHQLSQHVTVDVFGRGGPGQPVPE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPDWPPPWGIQAHTAEEVDLRVLDYEEAAAAAEALATSSPRPPGQRWVWMNFESPS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----PRKAHHDWAVFHEESPKNNYK
                                                      /sv;
 cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48
91
190
87
241
                                                      TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Golgi stack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -LVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405
91
190
87
241
                                                                                                                                                                                                                                                                                      Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45569 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8.3%;
23.7%;
   expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QRAGDRPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
LUMMENAL, CATALLYTIC (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTI
N-LINKED (GLCNAC. . .) (POTENTI
P -> R (IN REF. 2 AND 3).
E -> D (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 219; DB 1;
Pred. No. 6.9e-10;
                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYTOPLASMIC (POTENTIAL).
SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DE72E1FDC390268D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
   Ģ,
   ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394
 mouse alpha-1,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -DVFVPYGYLYPRSHPGDPPSGLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            136
                                   몺
                                                            Ş
                                                                                                      뮹
                                                                                                                                Š
                                                                                                                                                                          밁
                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U33457; AAC52269.1; --
EMBL; D63380; BAA09697.1; --
EMBL; D63379; BAA09696.1; --
ENBL; A57596; A57596.
MGD; MGI:95594; Fut4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - - H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Signal-anchor;
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_transf_10; T.
Transferase; Glycosyltransferase; Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               i
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=Short;
                                   258
                                                                                                        206
                                                                                                                                            168
                                                                                                                                                                              152
                                                                                                                                                                                                                125
                                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                    90 IMLWWSPLTGETG--
                                                                                                                                                                                                                                                                                                                      ; 68
                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                          PPWGARERTDKALVLRVFDDQEGAVTLTGKALETVGSRPPGQRWVWMNFESPS------H
                                                                                                                                        KPVI----TLFNYTATESRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAP--
                                                                                                                                                                                                                                                VLLWWEPFRGRGGYPKSPPDCSLRFNISGCRLLTDRAAYGEAQAVLFHHRDLVKELHDWP
AQYKFILAFENAVCDDYITEKFWRPLKL-GVVPVYYG--SPSITDWLPSNKSAILVSEFS
                                  GLVAWVVSNWNEHQARVRYYHQLSRHVSVDVFGRTGPGRPVP
                                                                    --LVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII
                                                                                                        TPGLRGLAKDLFNWTLSYRTDSDVFVPYGFLYSRS---
                                                                                                                                                                                                                -----HIDWAVFHEESPKNNYKLFH
                                                                                                                                                                                                                                                                                                                                                                                            433 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75
117
218
                                                                                                                                                                                                                                                                                                                        Conservative .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53 L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Golgi
                                                                                                                                                                                                                                                                                                                                                                                        252
257
260
273
49481 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                433
117
218
33
                                                                                                                                                                                                                                                                                                                                       8.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      stack; Alternative splicing.
52 CYTOPLASMIC (POTENTIAL).
74 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN)
```

48;

--RLGQCG--ADACFFTINRTYLHHH--

----DPTEQPSGLGPQLARKR

205

167 151

-AIGLLHTV

307

278 257 22¢ Score 213; DB Pred. No. 2.3e 18; Mismatches

DB 1; 140;

Length

. 433; 104;

Indels

Gaps

124 15 CRC64;

N-LINKED (GLCNAC. ..) (
N-LINKED (GLCNAC. ..) (
MISSING (in isoform Shor /FTId=VSp 001778.)
Q -> P (IN REF. 2). R -> Q (IN REF. 2). V -> E (IN REF. 2). V -> Q (IN REF. 2). R -> Q (IN REF. 2). Y -> Q (IN REF. 2). Y -> E (IN REF. 2). W; 2401822F02B5D021 CRC64

short).

(POTENTIAL)

POTENTIAL) .

(POTENTIAL).

LUMENAL, CATALYTIC (POTENTIAL)

LUMENAL,

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- PATHWAY: Glycosylation.
-!- SUBCELLULAR LOCATION: Type-
form in trans cisternae of
-!- ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fucosyltransferase gene that fucosyltransferase IV gene."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. 119:302-308(1996).
- FUNCTION: May catalyze alpha-1,3
the expression of Lewis X/SSEA-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ISOId=Q11127-2; Sequence=VSP_001778; TISOID=TOTAL TOTAL TOTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IsoId=Q11127-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   shows homology with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          II membrane protein.
Golgi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1g1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     glycosidic
and VIM-2 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antigens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the human alpha-1,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Membrane-bound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 involved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9LJK1;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Glycoprotein 3-alpha-L-fucosyltransferase A (EC 2.4.1.214)
alpha-(1,3)-fucosyltransferase) (Fuc-T C3) (FucTA) (FucTI)
FUTI1 OR AT3G19280 OR MVII1.20.
                                                            and
DNA
[4]
                                                                                                                                                                                                                                                                                    STRAIN=cv. Columbia;
MEDLINE=2053099; PubMed=10907853;
MEDLINE=2053099; PubMed=10907853;
Kaneko T., Katch T., Sato S., Nakamura Y., Asamizu E., Tabata S.;
"Structural analysis of Arabidopsis thaliana chromosome 3. II.
Sequence features of the 4,251,695 bp regions covered by 90 P1, TAC
                                                                                                                                                                                                                                                                                                                                                                                synthesis."
Submitted (
                                                                                                                                                                                                                                                                                                                                                                                                      "Molecular cloning and characterization of a alphal, 4-fucosyltransferase with specificity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Cv. Columbia; TISSUE=Root;

MEDLINE=21313304; PubMed=11420147;

Wilson I.B., Rendic D., Freilinger A., Dumic J., Altmann F., Mucha J.

Muller S., Hauser M.T.;

"Cloning and expression of CDNAs
homologues from Arabidopsis thaliana.";

Biochim. Biophys. Acta 1527:88-96(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; rosids;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ARATH
                                                                                                                                                                                                                                    SEQUENCE OF 26-287 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Bakker H
                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=cv. Columbia; TISSUE=Siliques;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
            N-acetyl-beta-D-glucosaminyl}asparagine.
COFACTOR: Manganese.
PATHWAY: Glycosylation.
SUBCELLULAR LOCATION: Type II membrane p
                                                                                                                                                                                                                                                              Res. 7:217-221(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               308
                                                                                                                                                                                                                                                                          clones.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAASLAAYLIFLDRNVAVYRRYFRWRRSFAVH----ITSFWDEQW---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFE 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRTCQAV-----QTSGDQPK 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CMVCTKVWANIRLQEKGLPPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SEP-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                to the EMBL/GenBank/DDBJ databases
 Type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    416
II membrane protein. Membrane-bound Golgi (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            501 AA.
                                                                                                                                                                                                                                                                                                                                                                                                       plant (Beta vulgaris) for Lewisa and Lewisb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Altmann F., Mucha J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Core (AtFUT11).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              407
```

```
Ś
                                                        뮍
                                                                                    8
                                                                                                                    밁
                                                                                                                                                Ş
                                                                                                                                                                                밁
                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                         Query Match
Best Local Sin
Matches, 62;
                                                                                                                                                                                                                                                                                                       CARBOHYD
CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
DOMAIN
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AP000419; BAB02969.1; --
EMBL; AJ345084; CAC78979.1; --
EMBL; AJ404860; CAC38048.1; --
EMBL; AF277228; AAM68912.1; --
EMBL; AF277229; AAM68913.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001503; Glyco_trans_10.
Pfam; PF00852; Glyco_transf_10; 1.
Transferase; Glycosyltransferase; Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            between the Swiss Institute of Bioinformatics and the EMBL outst
the European Bioinformatics Institute. There content is in
use by non-profit institutions as long as its content is in
modified and this statement is not removed. Usage by and for con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal-anchor;
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- SIMILARITY: Belongs to the glycosyltransferase family 10.
                                                                                                                                                                                                         205 LVPLOSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELM-TYIEVDSYGECLRNKDLPQQL
                           384 DVNQDNYIDAFECMVCTKVWANIRLQEKGLP 414
                                                                                                                    252 ---GŚVEK---VEALKHYKFSLAFENTNEEDYVTEKFFQSLVAGSVPVVVGAPNIEEFAP
                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                MAPVQPKTE--KALAAAFI--SNCAARNFRLQALEALMKTNVKIDSYGGCHRNRD-----
                                                                                                                                                KNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLP
----DMAAVHSSCRLCIFVATRIREQEEKSP
                                                          SPDSFLHIKQMDDVKAVAKKMKYLADNPDAYNQTLRWKHEGPSDSFKALI----
                                                                                       SNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQ
                                                                                                                                                                                                                                                                                                     61
26
64
337
420
481
481
210
AA;
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               4<sub>0</sub> ⊢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Golgi
                                                                                                                                                                                                                                                                                                                      501
35
64
337
420
481
210
                                                                                                                                                                                                                                                                                                       56205
                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                         8.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stack; Cell wall.
                                                                                                                                                                                                                                                                                                       ₩.
                                                                                                                                                                                                                                             35
;
                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. . .) (POTENTI:
K -> E (IN REF. 4; AAM68912).
WW: 2CEAC85CD1A3DA5B CRC64;
                                                                                                                                                                                                                                             Score 209; DB 1;
Pred. No. 5.8e-09;
5; Mismatches 84
                                                                                                                                                                                                                                                                                                                                                                                                             CYTOPLASMIC (POTENTIAL).
SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN)
(POTENTIAL).
LUMENAL, CATALYTIC (POTENTIAL).
                                                                                                                                                                                                                                              84;
                                                                                                                                                                                                                                                                        Length 501;
                                                                                                                                                                                                                                                                                                                                      (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                             30;
                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                         383
                                                                                                                        305
                                                                                                                                                     323
                                                                                                                                                                                    251
```

Search completed: September 9, 2004, 21:41:48 Job time: 27 secs

This Page Blank (uspto)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  554.5
521
521
487.5
369
318.5
282.5
277.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                                                                                          Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              September 9, 2004, 21:46:17; Search time 131 Seconds (without alignments) 1189.734 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-080-960-2
2625
1 MKVTGPPQGVTDSMQCFNDQ......LVDRNQNFSSQEFWGLVFKD 486
                                                                                                                                                        100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1335176 seqs, 320689617 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BLOSUM62
 Published_Applications
                                                                                                                                                                                                                                                                                               GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                             Length
                        492
492
168
107
107
107
261
178
157
365
                                                                                                                                                                                             DB
  10
10 US-09-876-997-284
11 US-09-864-408A-7106
10 US-09-864-948-20
12 US-10-184-648-20
12 US-10-184-648-20
13 US-10-242-515-1210
14 US-10-242-515-1210
15 US-10-072-977-21
13 US-10-1080-960-17
15 US-10-1080-960-17
15 US-10-1080-960-17
15 US-10-1080-960-17
15 US-10-1080-960-17
16 US-10-1080-960-17
17 US-10-1080-960-19
18 US-10-1089-977-9
19 US-10-139-977-9
                                                                                                                                                         US-09-731-872-284
                                                                                                                                                                                             IJ
                                                                                                                                                                    US-10-080-960-2
                                                                                                                                                                                                                               SUMMARIES
Sequence 2, Appli
Sequence 284, App
Sequence 284, App
Sequence 7106, Ap
Sequence 2, Appli
Sequence 20, Appli
Sequence 110, Ap
Sequence 1210, Ap
Sequence 17, Appli
Sequence 21, Appli
Sequence 3173, Ap
Sequence 3173, Ap
Sequence 9, Appli
Sequence 9, Appli
Sequence 9, Appli
                                                                                                                                                                                            Description
```

į	4.5	44	43	42	41	40	39	ယ 8	37	36	<u>ω</u>	34	ω S	32.	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
	_	213	216.5	-	221	N	2	233.5	233.5	236	237.5	238	238	239.5	4		4	251	ū	252	u		<u>о</u>	'n	256.5		o	σ	263	Ð
:	8.1						8.9					•	٠	9.1	9.3					9.6					•	•	0		0	10.0
	433	433	432	405	530	405	355	393	393	139	355	490	457	361	414	374	364	356	356	292	292	336	502	502	502	358	359	359	359	359
1	14	13	φ	ø	14	14	w	12	9	13	14	12	12	9	16	9	9	14	13	12	10	15	13	12	10	ø	14	14	13	w
	US-10-189-977-11	US-10-120-319-11	09-733-524-	-863-475A	0-234-041-	34-041-1	09-733-524-8	-10-700-505	4-077-	US-10-080-960-18	0-392-098-	US-10-425-114-43063	-10-425-114-543	A-2	US-10-437-963-108481	-863-47	-7	89-977-	-10-120-319-	48-	-09-	-10-108-26	-10-080-96	-10-184-64	-09-844-	US-09-733-524-6	92-098-	-10-189-977-1	US-10-120-319-10	US-09-863-475A-14
	-	Sequence 11, Appl	7,		0		α.	æ	N	Sequence 18, Appl	Sequence 12, Appl	Sequence 43063, A	Sequence 54364, A		æ	μ.	ហ		Œ	e 22	e 4,	e 47	16	e 23	,	6,	e 10	equence 10	e 10, App	

ALIGNMENTS

```
NUMBER OF SEQ ID NOS: 37
SOFTWARE: FASTSEQ for Win
SEQ ID NO 2
SEQ ID NO 2
LENGTH: 486
TYPE: PRT
CRACHISM: Homo sapiens
US-10-080-960-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: 80090, 52874,52880,63497, ANI
TITLE OF INVENTION: METHODS AND COMPOSITIONS OF
FILE REFERENCE: 38155-20044.00
CURRENT APPLICATION NUMBER: US/10/080,960
CURRENT FILING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/242,040
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: US 60/241,992
PRIOR APPLICATION NUMBER: US 60/241,992
PRIOR APPLICATION NUMBER: US 60/242,637
                                                                                                     S
Ś
                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-080-960-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/10080960
Publication No. US20020197695A1
GENERAL INFORMATION:
APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Glucksmann, Maria
APPLICANT: Meyers, Rachel
                                                                                                                                                                 Query Match 100.0%; Score 2625; DB 13; Best Local Similarity 100.0%; Pred. No. 1.4e-247; Matches 486; Conservative 0; Mismatches 0;
                                                                                            1 MKVTGPPQGVTDSMCCFNDQWDLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME
  EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINRTY 120
                                                           MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME
                                                                                                                                                                                                                                                                                                                                                                                                                                for Windows Version
                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND 33425
OF HUMAN
                                                                                                                                                                                                                             Length 486;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROTEINS
                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND USES THEREOF
                                                                                                                                                                             Gaps
                                                                 60
                                                                                                                       60
```

```
Ś
                                                             밁
                                                                                             δ
                                                                                                                                            밁
                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                         US-09-731-872-284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-09-731-872-284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patent.pm
SEQ ID NO 284
LENGTH: 406
TYPE: PRT
                                                                                                                                                                                                                         Matches 366; Conservative
                                                                                                                                                                                                                                              Query Match
Best Local |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 284, Application US/09731872 Patent No. US20020102604A1
                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: SIGNAL
LOCATION: -31..-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/731,872
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: US 60/169,629
PRIOR FILING DATE: 1999-12-08
PRIOR PILING DATE: 2000-03-06
NUMBER OF SEQ ID NOS: 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Bougueleret, Lydie
APPLICANT: Jobert, Severin
TITLE OF INVENTION: FULL-LENGTH HUWAN CDNAS ENCODING POTENTIALLY SECRETED PROTEINS
FILE REFERENCE: 78.US3.REG
                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                      61
                                                                                                                                            36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                       h 74.6%;
Similarity 97.9%;
LHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHESSPKNNYKLFHKPVITLFNYTATF
                                                                                             EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINRTY
                                                                                                                                          MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME
                                                                                                                                                               MKVTGPPQGVTDSMQCENDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME
                                                             EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINRTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLVFKD 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPKRWEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LHHHMTKAFLFYGTDENIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KLKGEISNORLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPKRWEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EAPTHLNSFLKKEGLTFNRKRKWELDSYPINLWWSPLTGETGRLGQCGADACFFTINRTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                  Score 1957.5;
Pred. No. 2.2e
1; Mismatches
                                                                                                                                                                                                                    5; DB 9;
2.2e-182;
les 2;
                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                    5
                                                                                                                                                                                                                    Gaps
                                                             155
                                                                                                    120
                                                                                                                                                                                60
                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 284, Application US/09876997

Publication No. US20030152921A1

GENERAL INVERMATION:
APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Dumas Milne Edwards, Jean Baptiste
APPLICANT: Jobert, Everin
TITLE OF INVENTION: FULL-LENGTH HUMAN cDNAs ENCODING POTENTIALLY SECRETED PROTEINS
FILE REFERENCE: 78.US4.CIP
CURRENT APPLICATION NUMBER: US/09/876,997
CURRENT APPLICATION NUMBER: US 09/731,872
PRIOR APPLICATION NUMBER: US 09/731,872
PRIOR APPLICATION NUMBER: US 09/731,872
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR APPLICATION NUMBER: US 60/189,629
                                                                        Ş
                                                                                                                     밁
                                                                                                                                                       Š
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                             멼
                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-876-997-284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
US-09-876-997-284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY: SIGNAL
LOCATION: -31..-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 74.6%;
Local Similarity 97.9%;
  301
                                                                            241
                                                                                                                     216
                                                                                                                                                         181
                                                                                                                                                                                                   156
                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                         366;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   396 KLKG-----RSLTS 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 216 SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSYCDPPSDRDSYVRE
                                                                                                                                                                                                                                                                                96
                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                               36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          156 LHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               406
                                                                                                                                                                                                                                                                                                                                                                                  1 MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME
                                                                                                                                                                                                                         LHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF 300
                                                                                                                                            SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE
                                                                                                                                                                                                                                                                                EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINRTY
                                                                                                                                                                                                                                                                                                       EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINRTY
                                                                                                                                                                                                                                                                                                                                                               MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME
  WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                          LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF
                                                                                                                     SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSYCDPPSDRDSYVRE
                                                                                                                                                                                                   LHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KLKGEISNORLLTA 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1957.5; DB 10; Length Pred. No. 2.2e-182;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                           es 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  406;
                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                                                                                                                    120
                                                                            300
                                                                                                                                                                                                                                          180
                                                                                                                     275
                                                                                                                                                         240
                                                                                                                                                                                               215
                                                                                                                                                                                                                                                                                                                                                             95
                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               335
```

```
RESULT 4
US-09-864-408A-7106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-864-408A-7106
                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-844-948-2
                                     US-09-844-948-2
                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/09844948 Publication No. US20030119161A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/864,408A
CURRENT FILING DATE: 2001-05-24
PRIOR APPLICATION NUMBER: 60/206,690
PRIOR FILING DATE: 2000-05-24
NUMBER OF SEQ ID NOS: 9068
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                        SEQ ID NO 2
Query Match
                                                                                                                                   APPLICANT: Meyers, Rachel A.
APPLICANT: Williamson, Mark
APPLICANT: Williamson, Mark
TITLE OF INVENTION: 32132, A NOVEL FUCOSYLTRANSFERASE FAMILY
TITLE OF INVENTION: MEMBER AND USES THEREFOR
TILLE REFERENCE: 10448-048001
CURRENT APPLICATION NUMBER: US/09/844,948
CURRENT FILING DATE: 2001-04-24
PRIOR APPLICATION NUMBER: US 60/200,604
PRIOR PELING DATE: 2000-04-28
NUMBER OF SEQ ID NOS: 6
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Shimkets, Richard A.
TITLE OF INVENTION: NO. US20040009474A1el Human
FILE REFERENCE: 21402-012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Leach, APPLICANT: Shimk
                                                           LENGTH: 492
TYPE: PRT
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      equence 7106, Application US/09864408A ublication No. US20040009474A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   396 KLKG-----RSLTS 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            159 PKNNYKLEHKPVITLENYTATESRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRL 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 38.7%;
Similarity 99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APLVYVQSDCDPPSDRDSYVRELMTYIBVDSYGECLRNKDLPQQLKNPASMDADGFYRII 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLKGEISNORLLTA 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSBFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AQYXFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPR 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ELASYIRRLDSDDRL 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AQYKFILAFENAVCDDCITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PENNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRL 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ELASYIRRLDSDDRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Martin D
  33.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1015; DB 11; Length 197; Pred. No. 1.2e-90;
    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
    872;
    DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polynucleotides and Polypeptides Enco
  Length 492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-184-648-20
                                                                                                                                                                                                                                                CURRENT FILING DATE: 2002-06-27
PRIOR APPLICATION NUMBER: US/10/184,648
CURRENT FILING DATE: 2002-06-27
PRIOR APPLICATION NUMBER: US 09/815,028
PRIOR FILING DATE: 2001-03-22
PRIOR PPLICATION NUMBER: PCT/US01/09358
PRIOR FILING DATE: 2001-03-22
PRIOR PPLICATION NUMBER: US 60/191,964
PRIOR PPLICATION NUMBER: US 09/801,220
PRIOR APPLICATION NUMBER: US 09/801,220
PRIOR APPLICATION NUMBER: US 09/801,220
PRIOR APPLICATION NUMBER: US 09/801,220
PRIOR FILING DATE: 2001-03-07
PRIOR FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: US 60/187,456
PRIOR APPLICATION NUMBER: US 60/187,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity Matches 178; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 20, Application US/10184648 Publication No. US20030224376A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                 PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Olandt, Peter J.
TITLE OF INVENTION: NOVEL HUMAN TRANSFERASE FAMILY MEMBERS AND USES THEREOF FILE REFERENCE: 10448-192001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Meyers, Rachel
                                                                                                                                                                PRIOR
                                                                                                                                                                                   PRIOR
APPLICATION NUMBER: US 60/191,865
FILING DATE: 2000-03-24
APPLICATION NUMBER: US 09/844,948
FILING DATE: 2001-04-27
APPLICATION NUMBER: PCT/US01/13805
FILING DATE: 2001-04-27
                                                                                                                                        FILING DATE: 2001-03-23
APPLICATION NUMBER: PCT/US01/09468
FILING DATE: 2001-03-23
                                                                                                                                                                                                            FILING DATE: 2000-03-07
APPLICATION NUMBER: US 09/816,714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363 FILDSIKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAASPGDSPVFEPHIAQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    253 CLRNKDLP-QCLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            194 ESIEVĻKSLRYLVPLQSKNKLRKR-LAPĻVVVQSDCDPPSDRDSYVRELMTYIEVDSYGE 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423 SHMDCPVPTPGFGNVEEIPENDSWKEMWLQDYWQGLDQGEALTAMIHNNET-EQTKFW 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423 THLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66 RPGREEAGDLPVLLWWSPGLFPHFPGDSERI-ECARGACVASRNRRALRDSRTRALLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79 RKRKWELDSYPIMLWWSP----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGLPP--KRWEAED 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PVYRGSPSVRDWMPNNHSVILIDDFESPQKLAEFIDFLDKNDEEYMKYLAYKQPGGITNQ 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNO 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLQNRELPTARLQDTATATTEDPELLAFLSRYKFHLALENAICNDYMTEKLWRPMHLGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PGTAYLR--RPVPPPMERAEWRRRGYAPLLYLQSHCDVPADRDRYVRELMRHIEVDSYGK 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDFRASAAPLPRLAHQSWALLHEESPLINFILSHGPGIRLFNLTSTFSRHSDYPLSLQWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYL 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hunter, John J.
MacBeth, Kyle J.
Rudolph-Owen, Laura A.
Leiby, Kevin R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Williamson, Mark
Tsai, Fong-Ying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kapeller-Libermann, Rosana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 4.8e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches 146; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          133
```

```
밁
                                                                                Ś
                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID N
SOFTWARE: FastSEQ
SEQ ID NO 20
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLIANCE DATE: 2001-06-15
PRIOR FILING DATE: 2000-06-15
PRIOR FILING DATE: 2001-06-15
PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 492
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR FILING DATE: 2000-10-06

OR APPLICATION NUMBER: US 10/072,285

OR APPLICATION NUMBER: PCT/US02/03736

OR FILING DATE: 2002-02-08

OR APPLICATION NUMBER: PCT/US02/03736

OR FILING DATE: 2001-02-08

OR APPLICATION NUMBER: US 60/267,494

OR FILING DATE: 2001-02-08

OR APPLICATION NUMBER: US 09/817,910

OR APPLICATION NUMBER: US 09/817,910

OR APPLICATION NUMBER: PCT/US01/09633

OR FILING DATE: 2001-03-26

OR FILING DATE: 2001-03-26

OR FILING DATE: 2001-03-26

OR FILING DATE: 2001-03-26
                                                                                                                                                                                                                                                                                                                                          Local Similarity
les 178; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 09/882,872 FILING DATE: 2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 2001-06-15
APPLICATION NUMBER: US 60/211,730
FILING DATE: 2000-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/19153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 09/882,836 FILING DATE: 2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 60/192,092 FILING DATE: 2000-03-24 APPLICATION NUMBER: US 09/842,528 FILING DATE: 2001-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/19543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/199,500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US01/40607 FILING DATE: 2001-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 09/973,457 FILING DATE: 2001-10-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 60/238,849 FILING DATE: 2000-10-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 60/235,044 FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/29963 FILING DATE: 2001-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 09/962,678 FILING DATE: 2001-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 2000-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/19138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2001-05-18
APPLICATION NUMBER: PCT/US01/16292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 60/212,079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 09/883,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2000-05-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/205,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 09/861,164 FILING DATE: 2001-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 2000-04-28
                                                                  134 TDFNIDSLPLRKAHHDWAVFHEESPKNNYKLFHKPVITLENYTATFSRHSHLPLTTQYL
                                                                                                                                                       66 RPGREEAGDLPVLLWWSPGLFPHFPGDSERI-ECARGACVASRNRRALRDSRTRALLFYG
                                                                                                                                                                                                                                       79 RKRKWELDSYPIMLWWSP-----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYG
TDFRASAAPLPKLAHQSWALLHEESPLINIFLLSHGPGIRLFNLTSTFSRHSDYPLSLQWL
                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-05-18
                                                                                                                                                                                                                                                                                                                                                                             42.6%;
                                                                                                                                                                                                                                                                                                                            74;
                                                                                                                                                                                                                                                                                                                            Score 872; DB 12;
Pred. No. 4.8e-76;
4; Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                 Length 492;
                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                     20;
                                                                                                                                                                                                                                                                                                                            Gaps
```

184 193 124 133

Length 168

```
GENERAL INFORMALI, YALUA,

APPLICANT: AZIMZAI, YALUA,

APPLICANT: DING, Li; NGUYEN, Dannic.

APPLICANT: GANDHI, Ameena R.; BURFORD, Neil;

APPLICANT: GANCHU, Kavitha; ELLIOTT, Vicki S.;

APPLICANT: RAMKUMAR, Jayalaxmi; YAO, Monique G.;

APPLICANT: LAL, Preeti G.; TANG, Y. Tom;

LAL, Preeti G.; TANG, Y. Tom;

POLICKY, Jennifer
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: XU, Yumming; HONCHELL, Cynthia D.;
APPLICANT: AL-YOUNG, Janice K.; BAUGHN, Mariah R.;
APPLICANT: DIGGAN, Brendan M.; LU, Dyung Aina M.;
APPLICANT: GIETZEN, Kimberly J.; JACKSON, Jennifer L.;
APPLICANT: RAUMANN, Bridget B.; LU, Yan;
APPLICANT: RACHARDSON, Thomas W.; EMERLING, Brook M.;
APPLICANT: RICHARDSON, Thomas W.; EMERLING, Brook M.;
APPLICANT: HAFALIA April J.A.; BURRILL, John D.;
APPLICANT: MARCUS, Gregory A.; ZINGLER, Kurt A.;
APPLICANT: KABLE, Amy E.; GORVAD, Ann E.
TITLE OF INVENTION: RECEPTORS AND MEMBRANE-ASSOCIATED PROTE
FILE REFERENCE: PF-0894 PCT
CURRENT APPLICATION NUMBER: US/10/467,595
CURRENT APPLICATION NUMBER: DCT/USO2/03868
PRIOR APPLICATION NUMBER: US 60/267,201
PRIOR APPLICATION NUMBER: US 60/267,201
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR APPLICATION NUMBER: US 60/282,679
PRIOR APPLICATION NUMBER: US 60/288,295
                                                                                 ; NAME/KEY: misc feat; OTHER INFORMATION: US-10-467-595-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-467-595-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                         SOFTWARE:
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7, Application US/10467595 Publication No. US20040166501A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 86
                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/348,687 PRIOR FILING DATE: 2002-01-14
                                                                                                                                                                TYPE: .PRT ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                  LENGTH: 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423 THISCPEPTVFAFSPIRTPPISSIREMWISSFEQSKKEAQAIRWIVDRNQNFSSQEFW 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                370 RIJTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGLPP--KRWEAED 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243 CLQNRELPTARLQDTATATTEDPELLAFLSRYKFHLALENAICNDYMTEKLWRPMHLGAV 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185 PGTAYLR--RPVPPPMERAEWKRRGYÁPLLYLÓSHCDVPADRDRYVRELMRHIPVDSYGK 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194 ESIEVLKSLRYLVPLQSKNKLRKR-LAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE 252
                                                                                                                                                                                                                                                                                                      PERL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PVYRGSPSVRDWMPNNHSVILIDDFESPQKLABFIDFLDKNDEEYMKYLAYKQPGGITNQ 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SHMDCPVPTPGFGNVEEIPENDSWKEMWLQDYWQGLDQGEALTAMIHNNET-EQTKFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLLDSLKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAASPGDSPVFEPHIAQP 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLRNKDLP-QQLKNPASMDADG---FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVV 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWARNAKAR, Anita; WARREN, Bridget A.; WALIA, Narinder K.; POLICKY, Jennifer L.;
                                                                                                                                                                                                                                                                                                    Program
                                                                                                                                      feature
                                                                                                      Incyte ID
21.1%;
                                                                                                         No:
Score 554.5; DB 16; Pred. No. 1.1e-45;
                                                                                                         1953366CD1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Monique G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (S)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     479
```

```
RESULT 8
US-09-764-877-1210
; Sequence 1210, Application US/09764877
. parent No. US20020147140A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
US-10-242-515-1210
US-10-242-515-1210
; Sequence 1210, Application US/10242515
; Publication No. US20040009488A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens US-09-764-877-1210
                                                                                                                                               APPLICANT: Rosen et al.
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and
FILE REFERENCE: PC005C1
CURRENT APPLICATION NUMBER: US/10/242,515
CURRENT FILING DATE: 2002-09-13
PRIOR APPLICATION NUMBER: 09/764,877
PRIOR PILING DATE: 2001-01-17
PRIOR PILING DATE: 2001-01-17
PRIOR APPLICATION NUMBER: 60/19,065
PRIOR APPLICATION NUMBER: 60/180,628
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR PILING DATE: 2000-06-28
PRIOR APPLICATION NUMBER: 60/217,487
PRIOR APPLICATION NUMBER: 60/217,487
PRIOR APPLICATION NUMBER: 60/217,487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Rosen et al.
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PC005
CURRENT FILING DATE: 2001-01-17
CURRENT FILING DATE: 2001-01-17
Prior application data removed - refer to PALM or file wrapper
NUMBER OF SEQ ID NOS: 4031
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 107
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                      FILING DATE: 2000-06-28
APPLICATION NUMBER: 60/217,487
FILING DATE: 2000-07-11
APPLICATION NUMBER: 60/225,758
FILING DATE: 2000-08-14
APPLICATION NUMBER: 60/217,496 FILING DATE: 2000-07-11
                                             FILING DATE:
                                                                   APPLICATION NUMBER: 60/220,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               178 ATESRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tch 19.8%; al Similarity 99.0%; 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34 EVMVELGKFERKEFKSSSLODGHTKWEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLW 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYG-TDFNIDSLFLFRKAHHDWA 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VCFLTTPDSTFELFARDV 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VFHEESPKNNYKLFHKPV 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WSPLTGETGRIGOCGADACFFTINRTYLHHHMTKAFLFYGLTTQKMGGRRYPPELPRAHS 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QVMVELGKFERKEFKSSSLQDGHTKMEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLW 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIM 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                             2000-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 521; DB 9;
Pred. No. 1.1e-42;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                       and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

```
CURRENT APPLICATION NUMBER: US/10/072,977
CURRENT FILING DATE: 2002-02-12
PRIOR APPLICATION NUMBER: PCT/US01/25288
PRIOR FILING DATE: 2001-08-13
PRIOR APPLICATION NUMBER: US 60/225,215
PRIOR FILING DATE: 2000-08-14
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 3.1
SEQ ID NO 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
US-10-072-977-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens US-10-242-515-1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; LENGTH: 261
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-072-977-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                8
                                                                                                                                                             밁
                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                           밁
밁
                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 4031
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 21, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 19.8%;
Best Local Similarity 99.0%;
Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Barash et al.
TITLE OF INVENTION: Human Secreted Proteins
FILE REFERENCE: PT057P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/225,447
PRIOR TILING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: 60/218,290
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178 ATFSRHSHLFLTTQYLESIEVLKSLRYLVEVQSKNKLRKRLAPLVYVQSDCDPPSDRDSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  238 VRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII 278
                                                                                                                                                                                                                                                                                                                                                             242 MTYIEVDSYGECLRNKDLP-QQLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITE
                                        472
                                                                                                                     414 PP--KRWEAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRN
  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRXRLAPLVYVQSDCDPPSDRDSY 60
                                                                                                                                                                                                                                                                                                                       1 MRHIPVDSYGKCLONRELPTARLODTATATTEDPELLAFLSRYKFHLALENAICNDYMTE
                                                                                                                                                                                                                                                                                                                                                                                                          98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VRELMTYTEVDSYGECLRNKDLPQQLKNPASMDADGFYRIM 101
                                                                                                                                                                                       EWXLKGBISNQRLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGL 413
                                                                                                                                                                                                                                                                    KFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSZFSHPRBLASYIRRLDSDDRLYEAYV 358
                                                                                                                                                               AYKOPGGITNOFLLDSLKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAASPGD
                                                                                                                                                                                                                                            KLWRPMHLGAVPVYRGSPSVRDWMPNNHSVILIDDFESPQKLAEFIDFLDKNDEEYMKYL
  ET-EQTKFW 248
                                        QNFSSQEFW 480
                                                                                SPVFEPHIAQPSHMDCPVPTPGFGNVEBIPENDSWKEMWLQDYWQGLDQGEALTAMIHNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10072977
No. US20030152933A1
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          18.6%; Score 487.5; DB 1
39.4%; Pred. No. 7.8e-39;
tive 51; Mismatches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 521; DB 15;
Pred. No. 1.1e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 14; Length 261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                            11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                               471
                                                                                                                                                                      180
                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                 60
```

```
밁
                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Milennium Pharmaceuticals, Inc.
APPLICANT: Milennium Pharmaceuticals, Inc.
APPLICANT: Meyers, Rachel
APPLICANT: Meyers, Rachel
TITLE OF INVENTION: 80390, 52874,52880,63497, ANI
TITLE OF INVENTION: METHODS AND COMPOSITIONS OF
FILE REFERENCE: 38155-20044.00
CURRENT APPLICATION NUMBER: US/10/080,960
CURRENT FILING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/242,040
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: US 60/241,992
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: US 60/241,992
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: US 60/241,992
PRIOR APPLICATION NUMBER: US 60/242,637
PRIOR SEQ ID NOS: 37
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-10-108-260A-3173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-080-960-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-080-960-17; Sequence 17, Ap; Publication No.
                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/108,260A
CURRENT FILING DATE: 2002-03-27
NUMBER OF SEQ ID NOS: 5458
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 3173
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3173, Application US/10108260A
Publication No. US20040005560A1
GENERAL INFORMATION:
APPLICANT: HELIX RESEARCH INSTITUTE
TITLE OF INVENTION: No. US20040005560A1el full length cDNA
FILE REFERENCE: H1-A0106
                                                                                                          Matches
                                                                                                                                                          Query Match
                                                                                                                                                                                                          -10-108-260A-3173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Consensus amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Artificial
                                                                                                                                                                                                                                                                                  ENGTH: 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                     Local
                                                  296 ITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 GKSKYGYRPSTSVVFLQSDCDIMSGREDYVKELMKHLPIDSYGSCLRNRDLPERQKD 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210 SKNKLRKR-LAPLYYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKN 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150 DWAVFHEESPKONYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQ 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 IWALLHEESPRUTPFVSNKEFLRHFHFTSTFSRYSNLPLTTMYLPSGEALTSKDYYVTFD 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91 MLWWS-PLIGETGRIGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLFRKAHH 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 LVWWSRDMSWNYDVQRQCGIHTCRITNKRS--RRPWARGVLFYGSNIKTGDFPLPRNEHQ 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75;
                                                                                                                                  Similarity
MTEKLWRPMHLGAVPVYRGSPSVRDWMPNNHSVILIDDFESPQKLAEFIDFLDKNDEEYM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10080960
                                                                                                       12.1%; ilarity 43.4%; Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14.1%; Score 369; DB 13; 42.4%; Pred. No. 1.7e-27; tive 31; Mismatches 67;
                                                                                                          26
•
                                                                                                     Score 318.5; DB 1
Pred. No. 1.3e-22;
6; Mismatches 48
                                                                                                                                                  DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND 33425
OF HUMAN PROTEINS AND USES THEREOF
                                                                                                       48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                     Length
                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                     Gaps
                                                     355
```

```
RESULT 14
US-10-189-977-9
                                                                                                                                                                                                 Ş
                                                                                                                       Ś
                                                                                                                                                                 밁
                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-120-319-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
US-10-120-319-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/120,319
CURRENT FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/092,315
PRIOR FILING DATE: EARLIER FILING DATE: 1998-06-05
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US 60/048,857
PRIOR FILING DATE: EARLIER FILING DATE: 1997-06-06
NUMBER OF SEQ ID NOS: 22
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 9, Application US/10120319
Publication No. US20020164749A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Taylor, Diane E. APPLICANT: Ge, Zhongming TITLE OF INVENTION: ALPHA-1, FILE REFERENCE: 07254/049001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                  328 ---ETLRPRSF----
                                                                                                                                                                   277
                                                                                                                                                                                                                                                                                        253
                                                                                                                                                                                                                                                                                                                                  176
                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                   133 GTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         356 AYVEWKLKGEISNORLLTALRERKWGVQDVNQDNYIDAFBCMVCTKVWANIRLQE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90 IMLWWSPLTGETGRLGOC-----GADACFFTINRT-----YLHH----HMTKAFLFY 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97;
                                                                                                                       RLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEK 411
                                                                                                                                                                                                      YYGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ 369
                                                                                                                                                                                                                                                                                    CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPV
                                                                                                                                                                                                                                                                                                                             LEPWP-SOPVETILNISAKTKL-----VAWVVSNWNTDSIRVQYYKLLKPHLQVDVYGR 228
                                                                                                                                                                                                                                                                                                                                                                                                              -----PPSPRPADQRWVWFSMESPSNCLKL--KDLDGYFNLTMSYRRDSDIFMPYGW 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VLLWTWPF-NOPVALSRCSELWPGTADCQLTVNRSEYPQADAVFVHHREVSHRPKMQL--
                                                                                                                                                                 VLGPSRVNYEQFLPP-KAFIHVEDFQSPKDLAQYLLALDKDYASYLNYFRWR-
                                                                                                                                                                                                                                               F--HTPLPHAL------MAKQLSQYKFYLAFENSLHPDYITEKLWKNALQAWAVPV
                                                                                                                                                                                                                                                                                                                                                                    LESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGDSPVFEPHIAQPSHMDCPVPT 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KGLPP--KRWEAEDTHLSCPEPT 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KYLAYKQPGGITNQFILDSLKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAAS 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3-FUCOSYLTRANFERASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 282.5; DB 13;
Pred. No. 1.5e-18;
9; Mismatches 117;
                                                                                -SWALMFCKACW---KLOOE 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                               276
                                                                                                                                                                                                                                                                                    311
                                                                                                                                                                                                                                                                                                                                                                    252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
```

Sequence 9, Application US/10189977

Publication No. US20030166211A1

GENERAL INFORMATION:

APPLICANT: Taylor, Diane E.

APPLICANT: Ge, Zhongming

TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFERASE

FILE REFERENCE: 07254/049001 CURRENT APPLICATION NUMBER: US/10/189,977 CURRENT FILING DATE: 2002-07-03

ф	Ş	οb	γQ	đ	8	Дb	γQ	망	δ.	Дb
328ETLRERSFSWALMFCKACWKLQQE 351	370 RLITALRERKWGVQDVNQDNYIDAFECWVCTKVWANIRLQEK 411	277 VLGPSRVNYEQELEP-KAFÍHVEDEQSEKDLAQYLLALDKÓVASYLNÝFRWR 327	312 YYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ 369	229 FHTPLPHALMAKQLSQYKFYLAFENSLHPDYITEKLWKNALQAWAVPV 276	253 CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPV 311	176 LEPWP-SQPVETLINISAKTKLVAWVVSNWNTDSIRVQYYKLLKPHLQVDVYGR 228	193 LESIEVLKSLRYLVÞLQSKNKLRKRLAÐLVYVQSDCDÞPSDRDSYVRELMTYIEVDSYGE 252	126pþsþrþádqrmvmfsmesbsnclkikdldgyfnltmstrrdsdifmpygm 175	133 GTDFNIDSLPLPRKAHHDWAVFHEESFKNNYKLFHKPVITLFNYTATFSRHSHLPLTIQY 192	69 VLLWTWPF-NQPVALSRCSELWPGTADCQLTVNRSEYPQADAVFVHHREVSHRPKMQL 125

Search completed: September 9, 2004, 21:58:05 Job time : 132 secs

This Page Blank (uspto)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on:
    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  263
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
255.5
25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-080-960-2
2625
1 MKVTGPPQGVTDSM(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389414 seqs, 51625971 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      September 9, 2004, 21:41:56
    MKVTGPPQGVTDSMQCFNDQ.....LVDRNQNFSSQEFWGLVFKD 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
    DB
US-09-092-315-9
US-09-390-131-7
US-09-733-524A-9
US-09-733-246-14
US-08-393-246-14
US-08-696-731-14
US-08-696-731-14
US-09-092-315-10
US-09-092-315-12
US-09-390-131-9
US-09-390-131-9
US-09-390-131-11
US-08-390-131-11
US-08-525-058A-11
US-08-525-058A-11
US-08-525-058A-11
US-08-09-092-315-12
US-08-391-261-2
US-08-391-261-2
US-08-391-261-2
US-08-273-411-3
US-08-525-058A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66 ; Search time 34 Seconds
(without alignments)
737.948 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           389414
Sequence 9, Appli
Sequence 7, Appli
Sequence 14, Appl
Sequence 14, Appl
Sequence 14, Appl
Sequence 14, Appl
Sequence 10, Appl
Sequence 10, Appli
Sequence 10, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 11, Appli
Sequence 2, Appli
Sequence 3, Appli
Sequence 2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
```

			•	
D Qy	D Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	Quer Best Matc Qy Db Db	RESULT S-09 S-09 S-09 S-09 S-09 S-09 S-09 S-09	222 822 822 822 822 822 822 822 822 82
370 RLITALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE 	193 LESIEVLKSLRYLVÞLQŠKNKLRKRLAPLVYVQSDCDPPSD : : : : : : : : : : : :	ery Match 10.8%; Score 282.5; D st Local Similarity 28.4%; Pred. No. 6.8e, tches 97; Conservative 49; Mismatches 97 IMLWWSPLTGETGRLGQCCADACFFTINRT	ALIGNMENTS ESULT 1 2-9-092-315-9 Sequence 9, Application US/09092315 Patent No. 6399337 GENERAL INFORMATION: APPLICANT: Taylor, Diane E. APPLICANT: Ge, Zhongming TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFERASE FILE REFERENCE: 07254/049001 CURRENT FILING DATE: 1998-06-05 CURRENT APPLICATION NUMBER: US/09/092,315 CURRENT FILING DATE: 1998-06-05 EARLIER APPLICATION NUMBER: US 60/048,857 EARLIER OF SEQ ID NOS: 22 SOFTMARE: FastSEQ for Windows Version 3.0 SEQ ID NO 9 LENGTH: 365 TYPE: PRT ORGANISM: Bos taurus S-09-092-315-9	B 239.5 9.1 361 5 PCT-US91-008 9 237.5 9.0 355 4 US-09-733-52 10 233.5 8.9 342 2 US-08-483-72 11 21 8.3 405 1 US-08-393-24 12 19 8.3 405 1 US-08-525-05 13 21 9 8.3 405 1 US-08-696-73 14 21 9 8.3 405 2 US-08-696-73 15 21 8.1 43 4 US-09-092-31 16 21 8.1 43 4 US-09-092-31 17 15 5.7 440 4 US-09-092-31 18 143 5.4 425 4 US-09-092-31 18 143 5.4 425 4 US-09-033-52 1143 5.4 476 4 US-09-733-52 1142 5.4 476 4 US-09-733-52
K 411 : E 351	LVYVOSDCDPPSDRDSYVRELMTYIEVDSYGE 252	65; 79; Gaps 1HMTKAFLFY 13HMTKAFLFY 13 VSHRPKMQL 12 RHSHLPLTTQY 19 : : : : : :		Sequence 7, Appli Sequence 12, Appli Sequence 2, Appli Sequence 8, Appli Sequence 8, Appli Sequence 8, Appli Sequence 8, Appli Sequence 4, Appli Sequence 11, Appli Sequence 11, Appli Sequence 14, Appli Sequence 3, Appli Sequence 3, Appli Sequence 5, Appli Sequence 6, Appli Sequence 6, Appli Sequence 5, Appli Sequence 5, Appli Sequence 5, Appli Sequence 5, Appli

```
CURRENT APPLICATION NUMBER: US/09/733,524A
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: US 09/092,315
PRIOR FILING DATE: 1998-06-05
PRIOR APPLICATION NUMBER: US 60/048,857
PRIOR FILING DATE: 1997-06-06
NUMBER OF SEQ ID NOS: 27
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                            US-09-733-524A-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Caenorhabditis elegans
US-09-390-131-7
                                                                                                                                                                                             Sequence 9, Application US/09733524A
Patent No. 6534298
GENERAL INFORMATION:
APPLICANT: Taylor, Diane E.
APPLICANT: Ge, Zhongming
TITLE OF INVENTION: HUCCLEIC ACIDS ENCODING ALPHA-1,3
TITLE OF INVENTION: FUCOSYLTRANSFERASES AND EXPRESSION SYSTEMS INTILE OF INVENTION: EXPRESSING THEM (amended)
FILE REFERENCE: 07254-049002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-390-131-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/390,131
CURRENT FILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSEQ for Windows Version 4.
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 7, Application US/09390131 Patent No. 6461835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Cummings, Richard D.
APPLICANT: Nyame, A. Kwame
APPLICANT: DeBose-Boyd, Russell A.
APPLICANT: DeBose-Boyd, Russell A.
TITLE OF INVENTION: FUCOSYLTRANSFERASES, POLYNUCLEOTIDES
TITLE OF INVENTION: ENCODING FUCOSYLTRANSFERASES, AND TRETITLE OF INVENTION: INCORPORATING SAME
ETTE EEEDENCE. 670 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      253 CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPV 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133 GTDFNIDSLPLPRKAННDWAVFHEESPKWNYKLFHKPVITLFWYTATFSRHSHLPLTTQV 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90 IMLWWSPLTGETGRLGQC-----GADACFFTINRT-----YLHH----HWTKAFLFY 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VLGPSRVNYEQFLPP-KAFIHVEDFQSFKDLAQYLLALDKDYASYLNYFRWR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YYGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNO 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---ETLRPRSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLLTALRERKWGVQDVNQDNYIDAFECWVCTKVWANIRLQEK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F--HTPLPHAL------MAKQLSQYKFYLAFENSLHPDYITEKLWKNALQAWAVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LEPWP-SQPVETLLNISAKTKL-----VAWVVSNWNTDSIRVQYYKLLKPHLQVDVYGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LESIEVIKSLRYLVPLQSKNKIRKRIAPIVYVQSDCDPPSDRDSYVREIMTYIEVDSYGE 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VLLWTWPF-NQPVALSRCSELWPGTADCQLTVNRSEYPQADAVFVHHREVSHRPKMQL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----PPSPRPADQRWVWFSMESPSNCLKL--KDLDGYFNLTMSYRRDSDIFMPYGW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abbott Laboratories
Cummings, Richard D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6679.US.O1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10.8%; Score 282.5; DB 4 28.4%; Pred. No. 6.8e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --SWALMFCKACW---KLQQE 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND TRANSGENIC MAMMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79;
                                                                                                                                                                                                                                                    FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                    MAKING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125
```

```
밁
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                 S
                                                                 US-07-914-281-14
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Bos
US-09-733-524A-9
                                     Patent No.
                                                 Sequence 14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
               GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                   312 YYGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ 369
                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                  253 CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPV
                                                                                                                                                                                                                                                                                                                                                                193 LESIEVIKSIRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE
                                                                                                                                                                                                                                                                                                                                                                                                                                   133 GTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLENYTATFSRHSHLPLTTQY 192
                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69 VLLWTWPF-NQPVALSRCSELWPGTADCQLTVNRSEYPQADAVFVHHREVSHRPKMQL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90 IMLWWSPLTGETGRLGQC-----GADACFFTINRT-----YLHH----HMTKAFLFY 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                 VLGPSRVNYEQFLPP-KAFIHVEDFQSPKDLAQYLLALDKDYASYLNYFRWR---
                                                                                                                                                                  RLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEK 411
                                                                                                                                                                                                                                                                   F--HTPLPHAL-----MAKQLSQYKFYLAFENSLHPDYITEKLWKNALQAWAVPV
                                                                                                                                                                                                                                                                                                                                    LEPWP-SQPVETLLNISAKTKL-----VAWVVSNWNTDSIRVQYYKLLKPHLQVDVYGR
                                                                                                                                                                                                                                                                                                                                                                                                   -----PPSPRPADQRWVWFSMESPSNCLKL--KDLDGYFNLTMSTRRDSDIFMPYGW
                                                   Application US/07914281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       taurus
NHOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.6%;
                                                                                                                                  -----SWALMFCKACW---KLQQE 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 277.5;
Pred. No. 2.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.3e-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                  311
                                                                                                                                                                                                                                                                                                                                  228
                                                                                                                                                                                                                                                                                                                                                                  252
                                                                                                                                                                                                                                                                                                                                                                                                   175
                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                   276
```

TELEFAX: (703)486-2347
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 1.
SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
TYPE: AMINO ACID COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/914,281 APPLICATION NUMBER: US/07/914,281
FILING DATE: 19320720
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Lavalleye, Jean-Paul M. P.
REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 2363-060-55
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)521-4500 APPLICANT: LOME, JOH TITLE OF INVENTION: I TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS COUNTRY: U CITY: Arlington STATE: Virginia ADDRESSEE: Virginia 1755 Jefferson Davis Highway, Fourth Floor OBLON, SPIVAK, HAN B.

METHODS AND PRODUCTS FOR THE SYNTHESIS

OF OLIGOSACCHARIDE STRUCTURES ON GLYCOPROTEINS,

OF GLYCOLIPIDS, OR AS FREE MOLECULES, AND FOR THE ISOLATION
OF CLONED GENETIC SEQUENCES THAT DETERMINE THESE STRUCTU 14 McCLELLAND, Version MAIER & NEUSTADT

```
; TOPOLOGY: ur; MOLECULE TYPE: US-07-914-281-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-393-246-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 14, Application US/08393246 Patént No. 5595900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                        FILING DATE:
CLASSIFICATION: 530
PRIOR ABPLICATION DATA:
APPLICATION NUMBER: US 08/220,433
FILING DATE: 30-MAR-1994
APPLICATION NUMBER: US 07/914,281
FILING DATE: 20-UUL-1992
ATTORNEY/AGENT INFORMATION:
NAME: LAVAlleye, Jean-Paul M. P.
REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 2363-060-55
                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1/2
STREET: Arlington
CITY: Arlington
TATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: LOWE, JOHN B.

TITLE OF INVENTION: METHODS AND PRODUCTS FOR THE SYNTHESIS
TITLE OF INVENTION: OF CLIGOSACCHARIDE STRUCTURES ON GLYCOPROTEINS,
TITLE OF INVENTION: OF CLYCOLIPIDS, OR AS FREE MOLECULES, AND FOR THE ISOLATION
TITLE OF INVENTION: OF CLONED GENETIC SEQUENCES THAT DETERMINE THESE STRUCTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                TELECOMMUNICATION INFORMATION: TELEPHONE: (703)521-4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134 TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87 SYPIMLWWSPLTGETGRLGOC-----GADACFFTINR-----TYLHHHMTKAFLFYG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN-------LIMSY 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL----VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEWKLKGEISNORLLTALRER--KWGVODVNODNYIDAFECMVCTKVWANIRLOEKGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIPLILLWTWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: P.C.
1755 Jefferson Davis Highway, Fourth Floom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
(703)486-2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---ETLRPRSFSWAL-----
                                                                                                                                                                                                                                                                                                          US/08/393,246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48; Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 263; DB 1;
Pred. No. 7.4e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 212
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
US-08-525-058A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-393-246-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
TYPE: amino acid
TOPOLOGY: unknown
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 14, Application US/08525058A
Patent No. 5770420
GENERAL INFORMATION:
APPLICANT: LOWE, JOHN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                         MEDIUM TYDE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/525,058A
                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Lavalleye, Jean-Paul M. P.
REGISTRATION NUMBER: 31,451
                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                        REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
nes 98; Conserv
                                                                                                                                                                                                                                                                                                                                                                   ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1755 Jef
CITY: Arlington
STATE: Virginia
                                                                                                                                                                     FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                        TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159 RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  319 FRWR------ETLRPRSFSWAL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         358 VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGL 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302 R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYBAY 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 PS---AQLPRSPRRQGQRWIWESMESPSHCWQL--KAMDGYFN-------LTMSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    134 TDENIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKDVITLENYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60 SIPLILLWTWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87 SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG
                                                                                                                                                                                                                                                                                                                                                                      22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QAHLKVDVÝGR--SHKPLPQ--
NE: (703)521-4500
: (703)486-2347
248855 OPAT UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10.0%; Score 263; DB 1; 1 ilarity 27.4%; Pred. No. 7.4e-19; Conservative 48; Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                      U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       METHODS AND PRODUCTS FOR THE SYNTHESIS
OF OLIGOSACCHARIDE STRUCTURES ON GLYCOPROTEINS,
GLYCOLIPIDS, OR AS FREE MOLECULES, AND FOR THE ISOLATION
OF CLONED GENETIC SEQUENCES THAT DETERMINE THESE STRUCTURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14:
                                                                                      2363-060-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----GIMMETLSRYKFYLAFENSLHPDYITEKLW 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
```

```
RESULT 7
US-08-696-731-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-525-058A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14, April
Sequence 10, April
Sequence 14, April
Sequence 16, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/696,731
FILING DATE: 14-AUG-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
OCCUPANTION APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: LOWE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: METHODS AND PRODUCTS FOR THE SYNTHESIS
TITLE OF INVENTION: OF OLIGOSACCHARIDE STRUCTURES ON GLYCOPROTEINS,
TITLE OF INVENTION: GLYCOLIPIDS, OR AS FREE MOLECULES, AND FOR THE ISOLATION
TITLE OF INVENTION: OF CLONED GENETIC SEQUENCES THAT DETERMINE THESE STRUCTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 1
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                        APPLICATION NUMBER: US 08/220,433
FILING DATE: 30-MAR-1994
APPLICATION NUMBER: US 07/914,281
FILING DATE: 20-JUL-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: P.C.
STREET: 1755 Jefferson Davis Highway, Fourth Floor
STATE: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local 58;
                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358 VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVÇTKVWANIRLQEKGL 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319 FRWR-----ETLRPRSFSWAL-----AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242 MTYIEVDSYGECLRNKDLFQQLKNFASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LESIEVIKSLRYLVP------LQSKNKIRKRLAPIVYVQSDCDPPSDRDSYVREL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIPLILLWTWPFNKFIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SYPIMIWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSL 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08696731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOHN B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.0%; Score 263; DB 1; Length 359, 27.4%; Pred. No. 7.4e-19; ative 48; Mismatches 118; Indels
                                                                                                                                                                                                                     08/393,246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -LIMSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
```

```
RESULT 8
US-09-042-531-14
                                                                                    밁
                                                                                                                                                                  밁
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-696-731-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 2/...
98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (703)486-2347
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
ENGTH: 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (703)486-2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Lavalleye, Jean-Paul M. P. REGISTRATION NUMBER: 31,451
                                                                                  319 FRWR-----ETLRPRSFSWAL-----
                                                                                                                                                                                                     302 R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                213 QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW 260
                                                                                                                       358 VEWKLKGEISNORLLTALRER--KWGVQDVNODNYIDAFECMVCTKVWANIRLOEKGL 413
                                                                                                                                                                                                                                                                                     242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301
                                                                                                                                                                                                                                                                                                                                                                                                                116 PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                       134 TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 SIPLILLWIWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87 SYPIMIWWSPLTGETGRIGQC----GADACFFTINR-----TYLHHHMTKAFLFYG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY 318
                                                                                                                                                                                                                                                                                                                                RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                                     LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (703)521-4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.0%; Score 263; DB 2; I
27.4%; Pred. No. 7.4e-19;
ative 48; Mismatches 118;
                                                                                  -AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                              ASMLT
                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                              158
```

Sequence 14, Application US/09042531

Patent NO. 6269193

Patent NO. 6269193

PATELICANT: LOWE, JOHN B.

TITLE OF INVENTION: METHOUS AND PRODUCTS FOR THE SYNTHESIS
TITLE OF INVENTION: OF OLIGOSACCHARIDE STRUCTURES ON GLYCOPROTEINS,
TITLE OF INVENTION: OF CLIGOSACCHARIDE STRUCTURES ON THE ISOLATION
TITLE OF INVENTION: OF CLOUGOSACCHARIDE STRUCTURES ON THE ISOLATION
TITLE OF INVENTION: OF CLOUGOSACCHARIDE STRUCTURES ON THE ISOLATION
TITLE OF INVENTION: OF CLOUGOSACCHARIDE STRUCTURES ON THE ISOLATION
TITLE OF INVENTION: OF CLOUGOSACCHARIDE STRUCTURES ON THE ISOLATION
TITLE OF INVENTION: OF CLOUGOSACCHARIDE STRUCTURES, AND FOR THE ISOLATION
TITLE OF INVENTION: OF CLOUED GENETIC SEQUENCES THAT DETERMINE THESE STRUCTU
CORRESPONDENCE ADDRESS:
ADDRESSEE: P.C.
STREET: 1755 Jefferson Davis Highway, Fourth Floor
STATE: Virginia
COUNTRY: U.S.A.
ZIP: 2202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/042,531
FILING DATE:
CHASSIFICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
BX873167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Guiguen Y
INRA - SCRIBE
Campus de beaulieu, I
Tel: 02.23.48.50.09
Fax: 02.23.48.50.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BX873167
B39 bp mRNA linear EST 17-DEC-2003
EX873167 AGENAE Rainbow trout multi-tissues-normalized (tcbk)
Oncorhynchus mykiss cDNA clone tcbk0017c.p.23 5prim, mRNA sequence.
BX873167
EX873167.1 GI:40001712
                                                                                                                                                                                                                                                                                                                                                                                 Email: Yann.Guiguen@beaulieu.rennes.inra.fr
Sequence cleaned of vector, adaptator and repetitions. Contact us
at sigenasupport@jouy.inra.fr to obtain the chromatogram of this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. 1 (bases 1 to 839)
Govoroun, M., Guiguen, Y. and Le Gao, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oncorhynchus mykiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oncorhynchus mykiss (rainbow trout)
                                                                                                                                                                                                                                                                                                                                                               sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     libraries in rainbow trout, Oncorhynchus mykiss
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Construction and primary characterization of normalized cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGTGCA 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCAAATGGGGAGTGCAAGATGTCACTCAGGACAATCTATATCGACACATTTGAGTGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGAATGGAAGCTGAA-GGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAA 113:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGAGCTGGCCCGCTATATCAAAACACTGGATCAAAATGACCAGGAGTATGAGGCCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCACAGTACAAGTTCATTCTTGCTTTTGAAAATGCTATCTGTGAAGATTATATCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGAAATGGGGAGTGCAAGACGTCAACCAGGACAAT-TACATCGATGCATTTGAGTGTAT 1190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGAATGGAAACTGAACAGGAGACATTTCCAATCCAAGGCTGCTTACAGCAATGAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATG 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTATCGACTGGCTTCCCAGCAACAAGAGTGCAATCTTGGTATCTAGTTTTTCACACCCTC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCA 1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAAACTCTGGCGGCCTCTGATGCTGGGAGTGGTACCTGTGTACTTTGGTTCTCCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCA
                                                                                                                                                                                                                                                                                                                    primer: M13R
                                                                                                                                                                                                                                                                                                                                               0017
/note="Vector: pT7T3D-pac; Rainbow trout multi-tissues-normalized + 2 subtractions; Clone distribution: AGENAE Resource centre Francois PIUMI, Francois.Piumi@jouy.inra.fr, INRA, CEA Radiobiologie e
                                                                                                                           /clone="tcbk0017c.p.23"
/tissue_type="multi-tissues"
/dev_stage="from embryos to /
/lab_host="DH10B"
                                                                                                                                                                                                            organism="Oncorhynchus
/mol_type="mRNA"
/db_xref="taxon:8022"
                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                     /clone_lib="AGENAE Rainbow trout multi-tissues-normalized
(tcbk)"
                                                                                                                                                                                                                                                                                                                                        row: p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RENNES
                                                                                                                                                                                                                                                                                                                                           column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cedex,
                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                       mykiss"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35042,
                                                                                                                                                    adults"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             France
  et
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           892
```

```
5
                                                       맑
                                                                                  8
                                                                                                                   밁
                                                                                                                                       S
                                                                                                                                                                           맑
                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 534; Conserv
                                                                                                                                                                                                         1170
                                                                                                                                                                                                                                                                                                                             1050
                                                                                                                                             1230
                                                                                                                                                                           609
                                                                                                                   669
                                                                                                                                                                                                                                                                                                489
                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                     990
                                                                                                                                                                                                                                                                                                                                                                                                                                                930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                630
786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTTTGTGATGACTACATCACTGAGAGAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCC
 GACGGCCAGTTACGAGCAGTCCAAGNAAGAGGCTAGGGCATT
                         GATTTCCAGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACT
                                                        GAGGGTATTTGACTTTGCTTCAGGCC---
                                                                                     CACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTG
                                                                                                                 ANAGGGCCTTGTTCCTAAAACCTGGCAAGCAGAGGGAAACCACCTAAAGTGTCCACTTCC
                                                                                                                                             AAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCC
                                                                                                                                                                             CATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGA
                                                                                                                                                                                                                                      GTTGGTAAAGGAGCTGAAGGAACGCCCATGGGGTGTCCAGGATCTGACACAGGAGAACTA
                                                                                                                                                                                                                                                                  ACTTCTGACAGCTCTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAACCAGGACAATTA
                                                                                                                                                                                                                                                                                                CGACGAGGAGTATGCCACTTATCTGGAGTGGAAGTTGAAGCGTGAAGTCTCCAACCTGGA
                                                                                                                                                                                                                                                                                                                         TGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCG 1109
                                                                                                                                                                                                                                                                                                                                                          AGTCGACCCAGACGACCCCTGAAAAACTGGCTCTGTATCTGAAGAGACTAGATGAGGA
                                                                                                                                                                                                                                                                                                                                                                                     TGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA 1049
                                                                                                                                                                                                                                                                                                                                                                                                                  TGTGTATTACGGTGCTCCCAATGTTCGGCAATGGCTGCCGAGCAACAGTAGTGCGGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTATATTACGGATCCCCCAGCATCACAGACTGCCTTCCCAAGTAACAAAAGTGCTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGTCTGTGACGACTACATCACCGAGAAACTATGGAGGCCTCTCAAGCTTGGGGTGGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rgccgarggcrrrrataggarcarrgcacagraraagrrratccragcrrrrgagaargc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGACAATGCCTCCACAACAAGACCTGCCTTCCCATCTGAGGGACTCGATTGCCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCGTCGGACCGGGATGCCTATGTGAGTGAGTTAATGAAGCACATCAGGGTTGATTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAGAACGAGCTGAGGAAAACACTAGCCCCGGTGGTGCTACGTCCAGTCAGACTGCGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTTGCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Etude du genome (LREG), Domaine de Vilvert, 78352, Jouy-en-Josas cedex, FRANCE, +33 (0) 1.34.65.28.02, (0) 1.34.65.22.73"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 350.6; DB 1
Pred. No. 1.6e-95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 285;
                                                          CTAGAAAGCGGACATCTTTGCGAGGAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                          1391
 827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     839;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +33
                                                                                        1349
                                                                                                                                                 1289
                                                                                                                                                                                                           . 1229
                                                                                                                                                                                                                                       608
                                                                                                                                                                                                                                                                  1169
                                                                                                                                                                                                                                                                                                  548
                                                           785
                                                                                                                    728
                                                                                                                                                                                                                                                                                                                                                          488
                                                                                                                                                                                                                                                                                                                                                                                                                   428
                                                                                                                                                                                                                                                                                                                                                                                                                                                 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ტ
ტ
                                                                                                                                                                               899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            929
```

Search completed: September 13, 2004, 02:18:00 Job time : 2686.88 secs

```
ACCESSION
VERSION
                                                                                                                                                                                                                               RESULT 14
BU449301
                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                            KEYWORDS
                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 448; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                     1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus gallus (chicken)
Gallus gallus
                                                               BU449301
BU449301.1 GI:25938612
EST.
                                                                                                                                                                         BU449301 728
603764226F1 CSEQRBN13 Gallus
                                                                                                                                                sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTTCCCAGTCACGACG
Plate: 97 row: E column: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Single pass sequencing. Bases called and alt trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seq primer: ATTTAGGTGACACTATAG Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCATCACAGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                     CAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTC 1429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCA 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCAAAAAGATGGGAGGCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCCAAGCAATAGAAGTGCTATCTTGGTATCAGAATTTTCTCACCCTAGAGAGCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTACCCACCTGAGCTGTCCAGAGCCTACAGTGTTCGCCTTTCTCACC---CCTGGTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCAGGACGTTAAGCAGGACAACTACATCGACGCGTTTGAGTGTATGGTGTGCACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGAAGGGCGAGATCTCGAATCAGCGACTTCTCACCGCACTCAGGGAACGGAAGTGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGACCTCTGAAGCTGGGGGGGCGTCCCTGTGTATTACGGATCCCCCAGCATCGCAGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTACATCAGAGCGCTGGATCGGGATGACAGACGCTACCAGGCCTACATAGAATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pCMV SPORT6; Site 1: NotI; Site 2: SalI; library made from pooled tissue from marrow, alveolar macrophage, ovary, fetal semitendonosus muscle, and fetal longissimus muscle."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="MARC 3BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 390; DB 12;
Pred. No. 1e-107;
0; Mismatches 75;
                                                                                                                                                                         gallus
                                                                                                                                                                            mRNA linear EST 29-NOV-2002
s cDNA clone ChEST687d8 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and fetal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                 Š
                                                                                                                                             d
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                    문
                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             473 CCCCGAAAAAAAAAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                533 CCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAG 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CACCAAAAAACAACTACAAACTTTTCCATGAACCAGCTATCACCTTATTCAACCACACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.

1 (bases 1 to 728)

1 (bases 1 to 728)

1 (bases 1 to 728)

1 (bases 2 to 728)

1 (bases 3 to 728)

1 (bases 3 to 728)

2 (bases 4 to 728)

3 (bases 5 to 728)

4 (bases 5 to 728)

5 (bases 6 to 728)

6 (bases 7 to 728)

7 (bases 7 to 728)

8 (bases 7 to 728)

9 (bases 7 to 728)

9 (bases 7 to 728)

1 (bases 8 to 728)

1 (bases 9 to 728)

1 (bases 1 to 728)

2 (bases 1 to 728)

2 (bases 1 to 728)

3 (bases 1 to 728)

4 (bases 1 to 728)

5 (bases 1 to 728)

6 (bases 1 to 728)

8 (bases 1 to 728)

9 (bases 1 to 728)

1 (bases 1 to 728)

1 (bases 1 to 728)

1 (bases 2 to 728)

1 (bases 2 to 728)

1 (bases 3 to 728)

2 (bases 2 to 728)

2 (bases 2 to 728)

2 (bases 2 to 728)

3 (bases 2 to 728)

4 (bases 2 to 728)

5 (bases 2 to 728)

6 (bases 2 to 728)

8 (bases 2 to 728)

9 (bases 2 to 728)

1 (bases 2 to 728)

1 (bases 2 to 728)

1 (bases 2 to 728)

2 (bases 2 to 728)

3 (bases 2 to 728)

4 (bases 2 to 728)

5 (bases 2 to 728)

6 (bases 2 to 728)

8 (bases 2 to 728)

1 (bases 2 to 728)

1 (bases 2 to 728)

2 (bases 2 to 728)

2 (bases 2 to 728)

2 (bases 2 to 728)

3 (bases 2 to 728)

4 (bases 2 to 728)

4 (bases 2 to 728)

5 (bases 2 to 728)

6 (bases 2 to 728)

6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Simon Hubbard
Department of Biomolecular Sciences
University of Manchester Institute of Science and Technology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: Simon.Hubbard@umist.ac.uk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 01612008930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Curr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: 01612360409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PO Box 88, Manchester, M60 1QD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12445392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UMIST)
                                       ACCTTCCTCAGCATCTCAGAAATCCATCTGCCATGGATGATGGGAACTTCTATAAAATAC 360
                                                                        ACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCA 832
                                                                                                                                                TACGTGAGTTGATGTGCCACATTGAAGTAGACTCTTACGGAGAATGTCTGCATAACAGAG
                                                                                                                                                                                  TTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAG
                                                                                                                                                                                                                                                                TTGCACCACTTGTGTATGTGCAGTCTGACTGCAATGCTCCTTCTGACCGGGACAGCTATG
                                                                                                                                                                                                                                                                                                             TTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATG 712
                                                                                                                                                                                                                                                                                                                                                                             TCCTCAGGTCCTTGAGACATATGATCCCCAGTGCAGATGAAGAACAGCCTGAGGAAGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGAC 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAACTTTCAGCCGCCATTCTCACCTACCGCTGACCACTCAGTACCTTGAGAGCATAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="CSEQRBN13"
//clone_lib="CSEQRBN13"
//note="Organ: ovary; Vector: pBluescript II KS(+); Site_1:
ECORI; Site_2: Not1; This normalized library was
constructed from 1 million independent clones. cDNA
synthesis was initiated using an oligo(dT) primer, using
methylated C in the first strand synthesis reaction.
Following this first strand reaction, double-stranded cDNA
was blunted, ligated to NotI adapters, digested with
ECORI, size-selected, and cloned into the NotI and ECORI
compatible sites of a custom modified MCS of the
pBluescript (KS+) vector. The library was normalized in 2
rounds using conditions adapted from Soares et al., PNAS
(1994) 91: 9218-9232 and Bonaldo et al., Genome Research 6
(1996): 791, except that a significantly longer
reannealing hybridization was used."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:9031"
/clone="ChEST687d8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Gallus gallus"
/mol_type="mRNA"
/strain="Layer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dev_stage="adult"
lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 388.8; DB 13;
Pred. No. 2.8e-107;
0; Mismatches 197;
```

Indels Length

2

Gaps

240

180

120

```
밁
                                    Ş
                                                                                      В
                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
BU261379
                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 588; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
123
                                                                                                                                 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gallus gallus (chicken)
Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PO Box 88, Manchester, M60 1QD, Tel: 01612008930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Department of Biomolecula University of Manchester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 849)
Boardman, P.E., Sanz-Ezquerro, J., Overton, I.M., I Boardman, P.E., Tickle, C., Brown, W.R.A., Wilson, S.A.
Fong, W.T., Tickle, C., Brown, J. R.A., Wilson, S.A.
A Comprehensive Collection of Chicken cDNAs
Corr., Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BU261379 849
603374248F1 CSEQCHN51 Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Simon Hubbard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Archosauria; Aves; Neognathae; Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BU261379.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UMIST)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .2445392
                                                                                                                          GTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTG 723
                                                                                                                                                                                                              CTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCGCTG 663
                                           GTGTATGTGCAGTCTGACTGCAATGCTCCTTCTGACCGGGACAGCTATGTACGTGAGTTG
                                                                                                                                                                                  CTGAGACATATGATCCCAGTGCAGATGAAGAACAGCCTGAGGAAGCGGCTTGCACCACTT
ATGTGCCACATTGAAGTAGACTCTTACGGAGAATGTCTGCATAACAGAGACCTTCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01612360409
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="CSEQCHN51"
//note="Organ: limbs; Vector: pBluescript II KS(+); Site_1:
FCORI; Site_2: Not1; This normalized library was
constructed from 1 million independent clones. cDNA
synthesis was initiated using an oligo(dT) primer, using
methylated C in the first strand synthesis reaction.
Following this first strand reaction, double-stranded cDNA
was blunted, ligated to NotI adapters, digested with
ECORI; size-selected, and cloned into the NotI and ECORI
compatible sites of a custom modified MCS of the
pBluescript (KS+) vector. The library was normalized in 2
rounds using conditions adapted from Soares et al., PNAS
(1994) 91: 9288-9282 and Bonaldo et al., Genome Research 6
(1996): 791, except that a significantly longer
reannealing hybridization was used."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Simon.Hubbard@umist.ac.uk.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="White Leghorn, Hisex"
/db xref="taxon:9031"
/clone="ChEST286012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev_stage="22"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Gallus gallus'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:25528988
                                                                                                                                                                                                                                                                                              28.4%;
70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biomolecular Sciences
                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                      Score 415.2; DB 13;
Pred. No. 2.5e-115;
0; Mismatches 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp n
gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA linear EST 26-NOV-2002
s cDNA clone ChEST286o12 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of Science
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Burt, D.W., Bosch and Hubbard, S.J
                                                                                                                                                                                                                                                                                                                      849;
                                                                                                                                                                                                                                                                      4
                                                                                         122
                                                                                                                                                                               62
                                                                                                                                                                                                                                                                        N
```

S

CAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTAT 843

```
RESULT 13
BM090273
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                   COMMENT
                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1384 CAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                      1 (bases 1 to 523)

Smith, T.P. L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T. Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Chackenbush, J. and Keele, J.W.

Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
Contact: Smith TPL USDA, ARS, US Meat Animal Research Center PO Box 166, Clay Center, NE 68933-0166, USTEL: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                      Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM090273 523 bp mRNA linear 505452 MARC 3BOV Bos taurus cDNA 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM090273.1 GI:17000901
                                                                                                      11282978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCATCACAGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTITATCCTAGCTTTTGAGAATGCAGTTTTGTGATGACTACATCACTGAGAAGTTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGCGCTGAGGCAGCTGGTGGAAAGGAA-CAGGAATTTACAACTCAAGAATTTGGATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTAACCATCTGAACTGCCCAAACCTGAGGCTTTCTGGGTTCTCCTC---TTCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCA 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGTGGGAAAACATCAGAAGAAGAAGAAAAAGGGATGGCTGCCCCAGAGGTGGAGTGCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAAGGCAGAA 1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCAAGATGTCACTCAGGACAATTATATTGACACATTTGAGTGCATGGTGTGTAACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAG 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGAAAGGAGACATTTCCAATCCAAGGCTGCTTACAGCAATGAAGGAACGCAAATGGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGA 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTATATCAAAACACTGGATCAAAATGACCAGGAGTATGAGGCCTACCTGGAATGGAAA 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAG 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTCCCAGCAACAAGAGTGCAATCTTGGTATCTAGTTTTTCACACCCTCGAGAGCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCA 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCCTCTGATGCTGGGAGTGGTACCTGTGTACTTTGGTTCTCCCAGCATTATCGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGTTCATTCTTGCTTTTGAAAATGCTATCTGTGAAGATTATATCACTGAAAAACTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         903
```

18

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
BE751825
LOCUS
                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Sim Matches 527;
         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                    BE751825
BE751825.1
EST.
1 (bases 1 to 562)

1 (bases 1 to 562)

Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Smith, T.P.L., Grosse, W.M., Cho, J., Fahrenkrug, S.C., Casas, E. L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Chitko-McKown, C.G., Chitko-McKown, C.G., Pertea, G., Chitko-McKown, C.G., Chitko-McKown, C.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Н
                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora;
                                                                                                                                                                                                                                                                                                                                                                                    BE751825 562 bp mRNA linear 204047 MARC 2BOV Bos taurus cDNA 5', mRNA sequence.
                                                                                                                                                                                                          Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                               Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAAATGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGTTTGCTTTCTCACCAC-----TCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCTTACCACCCAAACAATGGAAGGCAGATGTTAGCCACCTGCATTGCCCCGGAGCCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACTCGTTTGAGTGTATGGTGTGCCGCAGGGTGTGGGCCAAACAGTAGGCTGCAGGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAATTITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGAC 105:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTACGGATCCCCACCATCGCCGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTACGGATCCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTA 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGAATCAAAATTTTTCATCTGAAGAGTTCTGGGCTCTAGTATTTAAGGACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       тебатттесаветттеласлатеславалавалесскаевсясталовтевстветтват
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGTTCACCTTCTCATCTCCAGCTTCTCCGGCCCTACGTGGGAGATCGTTGCGAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACAGCTCTCAATGAACGGGAGTGGGGGTGTGCAGGACATTAACCAGGACAACTACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTTGTATGAGACCTATGTAGAGTGGAAGCTAAAGGGCAAGATCTCTAACCAGCGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCGGAATTCTCTCACCCCAGAGAGCTGGCGAGCTTCATTAGGAGACTGGATTATGACGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTGACGATTACATCACAGAGAAGTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGCTTTCTACAGAGTCATTGCCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Institute
                                                                                                                                                                                                                                                                                                                                            GI:10165817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of Mental Health (NIMH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 438.4; DB 14
Pred. No. 1.8e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121;
                                                                                                                                    Roberts, A.J., Stone, R.T., ahrenkrug, S.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             751;
                                                                                                                                                                                                                               Euteleostomi;
cora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                 bovine cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                           Liang, F.,
                                                                                                                                                                                                                                                                                                                                                                                                              25-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
PUBMED
COMMENT
                                          8
                                                                                밁
                                                                                                                            8
                                                                                                                                                                                   멼
                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                            1086
                                                   1326
                                                                                                                                                                                                                                  1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1026
                                                                                                                                                                                                                                                                               361
                                                                                              481
                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166. In
Tel: 402 762 4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BACKWARD: GTTTTCCCAGTCACGACG
Plate: 44 row: G column: 22
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 402 762 4366
Fax: 402 762 4390
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases cal
v0.980904.e. Vector identified by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAAGCAATAGAAGTGCTATTCTGGTATCAGAATTTTCTCACCCTAGAGAGCTGGCGAG
                                     TTTGAGCTCTTTGCGAGAGATGTGG 1350
                                                                                              TACCCACCTGAGCTGTCCAGAGCCTACAGTGTTCGCTTTCTCACC---CCTGGTCCCACG
                                                                                                                            TACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACCCCGGACTCCACC 1325
                                                                                                                                                                                                                      GTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGA 1265
                                                                                                                                                                                                                                                                               GCAGGACGTTAAGCAGGACAACTACATCGATGCGTTTGAGTGTATGGTGCACCAAGGT
                                                                                                                                                                                                                                                                                                         GCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGT 1205
                                                                                                                                                                                                                                                                                                                                                                 GAAGGGCGAGATCTCGAATCAGCGACTTCTCACTGCGCTCAGGGAACGGAAGTGGGGGGT
                                                                                                                                                                                                                                                                                                                                                                                             GAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGT 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTACATCAGAGCGCTGGATCGGGATGACAGACGCTACCAGGCCTACATAGAATGGAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCTCTGAAGCTGGGGGTCGTCCCTGTGTATTACGGATCCCCCAGCATCGCAGACTGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCT 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTTATCCTTGCTTTTGAGAATGCGGTGTGCGACGACTACATCACTGAGAAGCTCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAG 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTGAGCAACCCGGCCTCGATGGACGCCGATGGCTTTTTCAGGATCCTCGCCCAGTATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAA
                                                                                                                                                                                       -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Bos taurus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 422.6; DB 10;
Pred. No. 1.1e-117;
0; Mismatches 79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       called and alt trimmed with phred by cross_match with the -minscore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

1025

180

120

60

240

537

420

360

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                  맑
                                                                                       Š
                                                                                                                                                                       Ş
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
Š
                                                                                                                                       В
                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                          240
                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                597
                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
BF181631
BF181631.1 GI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM9309 row: k column: 09 High quality sequence stop: 645.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
Email: Cgapbs-remail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphre
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 945)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601804438F1 NCI_CGAP_Mam5 Mus musculus cDNA clone IMAGE:4035584 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                 CCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGC 836
                                                                                                                                                                                                                                                      CGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTTACGAAACAAAGACCT 776
                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAAGACTTGC 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCT
GTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCCAGCATCAC
                                                                                         ACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAA 896
                                                                                                                                       TCCTCAGCAGCTGAAAAACCCCGCCTCCATGGATGCTGATGCTTTCTACAGAGTCATTGC
                                                                                                                                                                                                                            GGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTTTACAGAACAGAGATCT
                                                                                                                                                                                                                                                                                                             -CCCATGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACAGGGACAGCTATGTCCG 179
                                                                                                                                                                                                                                                                                                                                                      TCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCG 716
                                                                                                                                                                                                                                                                                                                                                                                                    GAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACCTAAGACAAAAACTGGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTCAGCAGGCATTCCCACTTGCCACTGACTACGCAGTACCTGGAAGGCGTGGACGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone lib="NCI CGAP Mam5"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI;
/site_2: NotI; Cloned unidirectionally. Primer: Oligo dT.
Library constructed by Life Technologies. Investigators
providing samples: Lothar Hennighausen/Robin Humphreys,
NIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
/clone="IMAGE:4035584"
/tissue_type="tumor, gross tissue"
/dev_stage="7 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
ool_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:11059773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 444; DB 10;
Pred. No. 3.9e-124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 945;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Robin Humphreys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                          239
                                                  359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   596
```

GTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTGTATTATGGATCCCCCACCATCGC

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
CF748965
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   It (bases 1 to 751)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: Gapbs-romail.nih.gov

Tissue Procurement: Dr. James Lin University of Iowa

CDNA Library preparation: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

CDNA Sequencing by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Distribution information can be found at

http://genome.niowa.edu/distribution/mousefl.html

This clone was contributed by the Brain Molecular Anatomy Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 657 GCCGCAGGTGTGGGCAAACAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CF748965 751 bp mRNA linear EST 10-OCT-
UI-M-HJ0-cmj-a-17-0-UI.r1 NIH BMAP HJ0 Mus musculus cDNA clone
IMAGE:30631600 5', mRNA sequence.
CF748965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CF748965.1 GI:37645310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGGGAGTGCAAGACGACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCAAGGTGTGGGCTAATATCAG 1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGGGTGTGCAGGACATTAACCAGGACAA-TACATTGACTCGTTTGAGTGTATTGGTGT 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGAAGCTAAAGGGCAAGATCTCTAACCAGCG-GTTCTGACAG-TCTCAATGAACGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAA 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGGCGAACTTCATTAGGAGACTGGATTATGACGATGGGTTGTATGAGACCTATGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTATCGGAATTCTCTCACCCCAGAGA
/db xref="cayou:10090"
/db xref="cayou:10090"
/clone="IMAGE:30631600"
/tissue_type="Upper Head"
/dev_stage="9.5 and 10.5 dpc"
/lab_host="DH10B (T1 phage resistant)"
/clone lib="NIH_BMAP HJ0"
/sit=_: Not I; The library was constructed according
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. Denatured RNA was size fractionated on a 1% sgarose
gel.First strand cDNA was size fractionated on a 1% sgarose
size selected according to mRNA size fraction, ligated
with EcoR I adaptor, digested with NotI and then cloned
directionally into pYX-Asc vector. The library tag
sequence located between the Not I site and the polyA tail
is CGAACTGAAT. This library was created for the University
Iowa Brain Anatomy Project (BMAP): 'Gene Discovery in the
Developing Mouse Nervous System', supported by National
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'mol_type="mRNA"
'strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 10-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      539
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8
BG332068
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                    ORGANISM
source
          Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llhl.gov
Plate: LLCM1242 row: d column: 18
High quality sequence stop: 635.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67
                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 687)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                 BG332068
BG332068.1 GI:13138506
                                                                                                                                                                                                                                                                                                                                                                                             BG332068 687 bp r
602432466F1 NIH_MGC_18 Homo sapiens
                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence
                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGGGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCCAGCTTTGAACAATCCAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAAGGCTTTACCACCCAAAAGATGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCCAGCATCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTGTCAGGGAACGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGACGCATTTGAGTGTATGGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGCAAGTTATATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACA
                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                690
                                                                                                                                                                                                                                                                                                                                                                                                                 m.R.N.A
                                                                                                                                                                                                                                                                                                                                                                                                mRNA linear EST 27-FEB-2001 CDNA clone IMAGE:4549985 5',
                                                                                                                                                                                                                      Gene
                                                                                                                                                                                                                                                                     Hominidae;
                                                                                                                                                                                                                      Collection
                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                       Homo
                                                                                               be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 1377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      126
   RESULT 9
BF181631
LOCUS
                                                                                                                                                                 Ş
                                                                              뭉
                                                                                                      S
                                                                                                                                         밁
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 654
                                                                                                                                                                                                                                       1059
                                                                                                                                                                         1116 GACAGCTCTCAGGG--AACGGAAATGGGGAGTGCAAGACG--TCAACCAGGACAA--TTA 1169
                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                    999
                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                  939
                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 654;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
   BF181631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 95.9
54; Conservative
                                                                                ATCGGATGCATTCGAGTGTATGGTG
                                                                                                         CATCGATGCATTTGAGTGTATGGTG 1194
                                                                                                                                             AACAGCTCTCAGGGCAACGGAACATGGGGAGTGCAAGACGGTCAAACCAGGACAAATTAC 659
                                                                                                                                                                                                                           GTATGAGGCCTATGTAGAATGGAAGCTGA-AGGGTGAGATCTCTAACCAGCGA--CTTCT 1115
                                                                                                                                                                                                                                                                     ATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA-T 539
                                                                                                                                                                                                                                                                                           ATTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATT 1056
                                                                                                                                                                                                                                                                                                                                    CGGATCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGA
                                                                                                                                                                                                                                                                                                                                                                CGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                    TGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTA 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTTATAGGATCATAGCACAGTATAAGTTTATCCTAGC-TTTGAGAATGCAGTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATG 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGA 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAA 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38.4%;
95.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 561; DB 12;
Pred. No. 4.3e-160;
0; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTA
   945
                                                                                684
 å,
   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
     linear
```

EST

31-OCT-2000

998

420

480

878 301 818 241

181

360

/organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:9606"
/db xref="taxon:9606"
/clone="IMAGE:4549985"
/tissue_type="large_cell_carcinoma"
/tissue_type="large_cell_carcinoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH MGC 18"
/clone_lib="NIH MGC 18"
/clone_Torgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: lung; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Ozgan: potB7; Site 1: XhoI; Site 2: XhoI; Site 2:
/note="Ozgan: potB7; Site 1: XhoI; Site 2: XhoI; Site 2:
/note="Ozgan: potB7; Site 1: XhoI; Site 2: XhoI; Site 2: XhoI; Site

11;

Gaps

121

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 706; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                         301
                                                                                                                                                                                                                                                                745
                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: bento-soares@uiowa.edu
Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics (www.resgen.com).
Seq primer: M13 Reverse.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 319 335 8250
Fax: 319 335 9565
                                                                                                                                                                                                                                               TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCCCAGCAGCTGAAAAATCCAGCCTCT 804
                                                                                                                                                                                                                                                                                                                                                         GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG 624
                                    AATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTA 924
                                                                                                                                                         ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG 864
                                                                                                                                                                                                                                                                                                                     GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT 240
                                                                                                                                                                                                                                                                                                                                                                                                                         ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGTGATCACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA 60
                                                                                                                                                                                                              TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Newton Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="UI_E_EJO"
//clone_lib="UI_E_EJO"
//clone="Crgan: eye; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: ECOR I; Site_2: Not I;
UI_E_EJO is a subtracted CDNA library constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand CDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tags for this library are: fetal eyes, AGANTCAGA; lens, CGATTAGCGA; eye anterior segment, AATGCCGCAT; optic nerve, CCATTAACTG; retina, CCGCG; Retina Foveal and Macular, GTCC; RPE and Choroid, ACCTA. This library was created for the program, Gene Discovery in the Visual System, supported by National Eye Institute (NEI)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="UI-E-EJ0-ahk-e-07-0-UI"
/tissue_type="fetal eyes, lens, eye anterior segment,
optic nerve, retina, Retina Foveal and Macular, RPE a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /dev_stage="fetal and adult"
/lab_host="BH10B (Life Technologies) (T1 phage resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Choroid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47.5%;
99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4156 MEBRF, Iowa City, IA 52242, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 694.4;
Pred. No. 5.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .5e-201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
                                                                                                                                                                                                              300
                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
Ś
                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
```

片

8 망

5

δÃ 밁 밁 Ś 밁 Ś

Š

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
BX348736
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                           Matches 679;
                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661 AATTACATCGATGCATTTGAGTGTATGGTGTGCA-CANGGTGTGGGCTA 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001) Contact: Genoscope Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960 bp mRNA linear EST 05-MAY-2003 BX348736 Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED Homo sapiens cDNA clone CS0DD001YG24 5-PRIME, mRNA sequence.

BX348736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cgi-bin/cluster.cgi?seq=CS0BAG009ZG08_CS00831_1&cluster=4610.r.
Contact : Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CS0BAG009ZG08_CS00831_1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4610.r For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BX348736.1 GI:30371315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.genoscope.cns.fr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                CCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCA 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT
CAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAG 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTA 1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases_1 to 960)
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                   /tissue type="NEUROBLASTOMA COT 50-NORMALIZED" /clone lib="Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED" /note="1st strand cDNA sprimed with a NotI-oligo (dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODD001YG24"
                                                                                                                                                                                  46.3%;
                                                                                                                                                           0,
                                                                                                                                                         Score 676; DB 13;
Pred. No. 2.8e-195;
D; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                              S
                                                                                                                                                                                                           Length 960;
                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 05-MAY-2003
                                                                                                                                                           0
                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                          66
```

```
RESULT 5
AL528778
LOCUS
               Ş
                                                   В
                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                          Best, Loo
Matches
                                                                                                                                                          Query Match
                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1001
                                                     307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     980
                 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              920
                                                                                       97
                                                                                                                                                                                                                                                                                                                                                                                                                            Genoscope - Centre National de Sequencage
BP 191006 EVRY cedex - France
Email: seqref@genoscope.cns.fr. Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4610.r For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODD001BD12QP1&cluster=4610.r. Contact
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODD001BD12QP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001) on Feb 13, 2001 this sequence version replaced Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL528778 1201 bp mRNA linear EST 23-MAY-200: AL528778 Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED Homo sapiens CDNA clone CSODD001YG24 5-PRIME, mRNA sequence.

AL528778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
1 (bases 1 to 1201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL528778.2 GI:31066628
EST.
                                                   ACCAGGTCATGGTTGAGCTGGGGAAGTTTGAWAGGAAGGAGTTTAAAAGTTCCAGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCTCAGGGAACGGAAATGGGGAGGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                    TTGAGTGTATGGTGTGCCGCAGGGTGTGGGCAAACAGTAGGCTGCAGGAGCAG 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTCAATGAACGGGAGTGGGGGTGTGCAGGACATTAACCAGGACAACTACATTGACTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAGACCTATGTAGAGTGGAAGCTAAAGGGCAAGATCTCTAACCAGCGGCTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCTCACCCCAGAGAGCTGGCGAACTTCATTAGGAGACTGGATTATGACGATGGGTTGT
                                                                                                                          Conservative
                                                                                                                                                                                                            /tissue_type="NEUROBLASTOMA COT 50-NORMALIZED" /clone_lib="Neurobles NEUROBLASTOMA COT 50-NORMALIZED" /note="Ist strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODD001YG24"
                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                       96.8%;
                                                                                                                        Score 794; DB 9; Pred. No. 2.1e-231; 7; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                        Length 1201;
                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gi:12792271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 23-MAY-2003
                                                                                                                        ې
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             For
                                                                                       156
                 216
                                                     366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            979
                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                         RESULT 6
BM717062
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                    COMMENT
                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                       ACCESSION
                                                   JOURNAL
MEDLINE
PUBMED
                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                    1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217
                                                                                                                                                                                                                                                                    H717062 T12 bp mRNA linear EST 28-
UI-E-EJO-ahk-e-07-0-UI.r2 UI-E-EJO Homo sapiens cDNA clone
UI-E-EJO-ahk-e-07-0-UI 5', mRNA sequence.
BM717062
BM717062.1 GI:19030320
                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 712)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
Contact: Soares, MB
Coordinated Laboratory
University of Iowa
                                                     8889548
                                                                      Genome Res.
97044477
                                                                                                                      Bonaldo, M.F., Lennon, G. and Soa
Normalization and subtraction:
                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                   Homo
                                                                                                           discovery
                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGACTACATACCTGAGAGGT--CTGGAGGCACTGAAACTGGGGGGWGGCCTGTWTATAH 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGACTACATCACTGAGAAGTTCTGGAGGGCCACTGAAACTGGGGGTAGTCCCCTGTATAT 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTTACGAAACAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATATACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTACTGACTTTWACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTACTGACTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGTGGTCCCCGCTGACGGGGAGACTGGGGAAGGTTAGGCCCAATGTGGAGCAGATGCTTGT 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATTTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGSTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTVTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACAGGGACAGCTATGTTCGCGAGCYGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                       6 (9),
                                                                                                                                                                                                                                 (human)
                                                                                       791-806
                   for
                 Computational Genomics
                                                                                                                          approaches
                                                                                                                            ç
                                                                                                                                                                                                                                                                                                                                          EST 28-FEB-2002
                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             876
```

1086

966

906

846 636 786 726 516 666 456 546

909 396

ordering

1212; 0;

Gaps

0

```
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
AY405137
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                 TITLE
JOURNAL
                                                                                                                                                   JOURNAL
                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                 AY405137 12

Mus musculus FUT10 gene, v genomic survey sequence.
AY405137
AY405137.1 GI:39761111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               930
                                       Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Todark, A.G., Tanenbaum, D.M., Civello, D.R., Lu, F., l Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sn. Adams, M.D. and Cargill, M.
Direct Submission
Submitted (16-NOV-2003) Celera
Rockville, MD 20850, USA
                                                                                                                                                                 gene
                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (Dases 1 to 1212)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Todd, M.A., Tanenbaum, C., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                 Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                   Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                   .4671302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCCCACAGTGTTTGC-TTTCTCACCACTCC-GGACTCCACCTTT---GAGCTCTTTGCG 1340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAATTTGAATTTCCAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAG 1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACATCGATGCA-TTTGAGTGTATGGTGTG-CACCAAGGTGTGGGCTAATATC-AGGCTTC 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCG 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTATATTACGGATCCCCCAGCATCACAGAGCTGGCTTCCAAGTAACAAAAGTGCTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCGATGGCTTTTATAGGATCATTGCCACAGTATAAGTTTATCCTAGCTTTTGAGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAGATGTGGATTTCCAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGAAAAGGGCTTACCACCCAAAAAATGGGAGGCAGAAAATACCCACCTGGAGTGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATCGATGCATTTTGAATGTATGGTGTGCCACCAAGGGTGGGGCTAATATCAAGGCTTC 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTTCTGACAGCTCTCAGGGAACGGAAATGGNGAGTGCAAGACGTCAAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTTCTGACAGCTCTCAGGGAACGGAAATGGGGGAGTGCAAGACGTC-AACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCCAAGTAACAAAAGTGCTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCCCCAGGGTTTGCTTTTCTCACCACTCCGGGACTCCACCTTTTGAGCTCCTTTCCGA 1020
                                                                                                                                                                                                                                                                                                                                   musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                     1212 bp
, VIRTUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1361
               Genomics,
                                                                                                                                                                                                                                                                                                                                                                                                                     DNA 1
TRANSCRIPT,
               4
Մ
                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
               West
                                                                                                                                                                                                                                                                                                                                                                                                                     inear GSS 16-DEC-2003 partial sequence,
                                                              P., Kejariwal,A.,
., Murphy,B.,
Sninsky,J.J.,
                 Gude Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
Ś
                              뮍
                                                       5
                                                                                               B
                                                                                                                            Š
                                                                                                                                                                 日
                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 925; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101
 941
                                                               881
                                                                                                   800
                                                                                                                                   821
                                                                                                                                                                                                   761
                                                                                                                                                                                                                                   680
                                                                                                                                                                                                                                                                   701
                                                                                                                                                                                                                                                                                                       620
                                                                                                                                                                                                                                                                                                                                     641
                                                                                                                                                                                                                                                                                                                                                                       560
                                                                                                                                                                                                                                                                                                                                                                                                        581
                                                                                                                                                                                                                                                                                                                                                                                                                                        500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
 GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT 1000
                                                     ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCCTGTATATTACG
                                                                                                   TCTACAGAGTCATTGCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTCTGTGACG
                                                                                                                       TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTTGTGATG
                                                                                                                                                                                                   TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                     GGGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTT
                                                                                                                                                                                                                                                        GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                       TAAGACAAAAACTGGCCCCATTGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                            TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                       AAGGCGTGGACGTCCTGAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACC
                                                                                                                                                                                                                                                                                                                                                                                                     AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAACCATACGGCCACGTTCAGCAGGCATTCCCCACTTGCCACTGACTACGCAGTACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCATGAAGAGTCCCCCAAAAACAATTATAAGCTCTTCCATAAACCAGTCATCACCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCATCATGACTGGGCGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTACCATCAACAGGACCTTCCAGCATCATCCGATGACCAGGGCCTTCCTATTCTACGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTGGCCTTGGCTGGGAGGACCAAGGTGGATGCTGGTAGCTACCCCATCGTGCTGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGACATAGAGATGTGGAGGGAGAGCCTAAACACCTGGAGCCATTTCCTGAAAAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGTAGTGGGTTGAGCTTGGGAAATTTGAAAGGAAGAAGCTTAAAGACTCCAATGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                     TACAGAACAGAGATCTTCCTCAGCAGCTGAAAAACCCCGCCTCCATGGATGCTGATGCTT
                                 ATTACATCACAGAGAAGTTCTGGAGACCACTGAAACTGGGGGGTCGTGCCCGTGTATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence was made by sequencing based on alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="FUT10"
/locus_tag="HCM2123"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .>1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54.8%;
81.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 800.2; DB 29; Pred. No. 2.7e-233;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
```

580

499 520 439 460

919 940 859 880 799 820 739 760 679 700 619 640 559 379 400 340

259 280

319

199

220

```
RESULT 3
BM559087
                                             유
                                                                                      밁
                                                                                                          Ś
                                                                                                                                       밁
                                                                                                                                                      5
                                                                                                                                                                               Дb
                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                 g,
                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                                                                 성 유
                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                             1160
                                                                  1181
                                                                                          1100
                                                                                                                1121
                                                                                                                                         1040
                                                                                                                                                               1061
                                                                                                                                                                                                            1001
                                                                                                                                                                                      980
                                                                                                                                                                                                                                    920
                                                                                                                                                                                                                                                         941
                                                                                                                                                                                                                                                                                                                               800
                                                                                                                                                                                                                                                                                  860
                                                                                                                                                                                                                                                                                                        881
                                                                                                                                                                                                                                                                                                                                                       821
                                                                                                                                                                                                                                                                                                                                                                             740
                                                                                                                                                                                                                                                                                                                                                                                                                            680
                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                    761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                             TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG
                                                                                                                                                        ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                  TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1060
                                                                                                                                                                                                                                                   GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                         CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                 ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                            TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                         TACGAAACAAAGACCTCCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCATGAAGAGTCCCCGAAAAACCAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACTTTAACATAGATAGCTTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTCCCCGCTGACGGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCCATTATGCTCTGGT
                                                                                           CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                         ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                    GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                   ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                                                                                                                                                                                                                                                TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                            GGGACAGCTATGTTCGCAAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCACCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCACGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTCCCCGCTGACGGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTNNATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACCATCAACCGGACCTACCTGCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                             1212
                                                                   1233
                                                                                           1159
                                                                                                                  1180
                                                                                                                                         1099
                                                                                                                                                               1120
                                                                                                                                                                                      1039
                                                                                                                                                                                                                                                           1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                     979
                                                                                                                                                                                                                                                                                   919
                                                                                                                                                                                                                                                                                                          940
                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                       880
                                                                                                                                                                                                                                                                                                                                                                               799
                                                                                                                                                                                                                                                                                                                                                                                                    820
                                                                                                                                                                                                                                                                                                                                                                                                                            739
                                                                                                                                                                                                                                                                                                                                                                                                                                                  760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
```

Q	3 40		. Q	Qу 5 Db 2	Qy 5	Db 4	Qy 3	Db Qq	Query Match Best Local S: Matches 1005	DEFINITION ACCESSION VERSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT SOURCE SOURCE SOURCE SOURCE ORGANISM
50 TGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGA 809	61 ACCATCAGACAGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTA	CECTED * COCHECA	330 CAAAAACAAGCTTAGAAAAAAGACTTGCTCCGCTGGTGTATGTTACAGTCAGACTGTGAACAC 360	570 CCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTC 629 	510 GATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTA	450 CTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGT 509 	990 CTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGA 449	330 TGCTTGTTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCT 389	62.3%; Score 910.4; DB 12; Length 1041; milarity 96.5%; Pred. No. 4e-267; Conservative 0; Mismatches 27; Indels 9; Gaps	AGENCOURT 6562690 NIH_MGC_67 Homo sapiens cDNA clone IMAGE.5551224 5', mRNA sequence. M559087.1 GI:18802381 BST. Homo sapiens (human) Homo sapiens (human) Homo sapiens (butherla; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1041) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D. Tissue Procurement: ATCC CONA Library Preparation: Life Technologies, Inc. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.linl.gov

N

```
B
                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
Ş
                               멍
                                                           Ş
                                                                                       D,
                                                                                                               δ
                                                                                                                                               밁
                                                                                                                                                                   Ş
                                                                                                                                                                                             B
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 1132; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                               380
                                                                                                                                                                                                                                                                                                                  500
                                                                                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
       881
                                   800
                                                                                        740
                                                                                                                                                 680
                                                                                                                                                                                                      620
                                                                                                                                                                                                                                 641
                                                                                                                                                                                                                                                             560
                                                                                                                                                                                                                                                                                      581
                                                                                                                                                                                                                                                                                                                                             521
                                                                                                                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                     761
                                                                                                                                                                          701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCATCAACCGGACCTACCTCCATCACATGACCAAAGCATTCCTCTTCTATGGTA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTCCCCGCTGACGGGGGAGACTGGGGAGGTTAGGCCCAATGTGGAGCAGATGCTTTTTCT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCCATTATGCTCTGGT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC 640
                                                                                                                                                                                                                                                                                                                                    TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATTGACCTTCAACAGGAAAAGGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCCTGTATATTACG
                                                                                                             TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT 820
                                                                                                                                                                                                                                                                                                                                                                         TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT 499
                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                              TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG 880
                                                                                        TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                 GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                      TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA 679
                                                                                                                                                                                                                              TTAGAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA 700
                                                                                                                                                                                                                                                                                                                    AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
<1...>1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    locus_tag="HCM2123"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1131.4;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ļ.
                                     TTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                                               439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       379
                                                                                                                                                                           760
        940
                                     859
                                                                                           799
                                                                                                                                                 739
                                                                                                                                                                                                                                                             619
                                                                                                                                                                                                                                                                                                                    559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

맑

860

ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
AY405136
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                S
                                                   밁
                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                      Query Match
Best Local Sin
Matches 1121;
                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      941
                    161
                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l (bases 1 to 1212)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.,
Adams, M.D. and Cargill, M.
Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                                                                                                                                                               Rockville, MD 20850, USA
This sequence was made by sequencing
them based on alignment.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 1212)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Direct Submission
Direct Submission
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pan troglodytes (chimpanzee)
Pan troglodytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AY405136 1212 bp DNA linear
Pan troglodytes FUT10 gene, VIRTUAL TRANSCRIPT, pa
genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene trios
Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AY405136
AY405136.1 GI:39761110
                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14671302
GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                       AGGTCATGGTTGAGCTGGGGAAGTATGAAAGGAAGNNNTNTAAAAGTTCCAGTTTGCAAG
                                                                          AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TIGAGIGIATGGIGCACCAAGGIGIGGGCTAATATCAGGCITCAGGAAAAG 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                          Conservative
                                                                                                                                                                                                                                                      /organism="Pan troglodytes"
/mol_type="genomic DNA"
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                  1. .1212
                                                                                                                                                                                                              /gene="FUT10"
/locus_tag="HCM2123"
                                                                                                                                         76.5%;
98.9%;
                                                                                                                      Score 1117.4; pred. No. 0; O; Mismatches
                                                                                                                        0;
                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                                                      genomic
                                                                                                                        12;
                                                                                                                                                           29;
                                                                                                                          Indels
                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                        exons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ar GSS 16-DEC-2003
partial sequence,
                                                                                                                                                                                                                                                                                                                                                                        and ordering
                                                                                                                                                             1212;
                                                                                                                          0,
                                                                                                                          Gaps
                                                       139
                                                                                         160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1159
                                                                                                                          0
```

```
Title:
Perfect score:
Sequence:
                                                                                                                     Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
1131.4
1117.4
910.4
800.2
                                                                                                                     Score
                                                                                                             %
Query
Match Length DB ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-080-960-3
1461
1 atgaaagtcacgggccctcc.....gcctagtattcaaggactga 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             September 12, 2004, 21:42:25 ; Search time 2684.88 Seconds (without alignments)
16249.761 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27513289 seqs, 14931090276 residues
  77.4
76.5
62.3
54.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estmu:
em_estplv:
em_estplr:
em_estpr:
em_htc:
em_htc:
em_htc:
em_htc:
em_htc:
gb_est1:
gb_est2:
gb_est4:
gb_est4:
                                                                                                                                                                                                                                                                                                                         em_estfun: *
em_eston: *
em_gss_inv:
em_gss_inv:
em_gss_vin:
em_gss_vin:
em_gss_vin:
em_gss_vin:
em_gss_vin:
em_gss_vin:
em_gss_vin:
em_gss_vin:
em_gss_pro:
em_gss_pro:
em_gss_pro:
em_gss_voi:
em_gs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estba:*
em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estin: *
  1212
1212
1041
1212
  29
29
29
AY405135
AY405136
BM559087
AY405137
                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55026578
AY405135 Homo sapi
AY405136 Pan trogl
BM559087 AGENCOURT
AY405137 Mus muscu
                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 1
AY405135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ი
```

07.		2 .	3	12.	16.	17.	21.	30.	34.	50.	٠	67.	69.	70.	82.	85.	æ	w		97.	30	15.	16.		25.	N	28.	46.	7	49.	50.	88.	in	15.		38	4	•			10
4.		٠.	4	4.	4.	4.	'n	5	6	.7	8	8	۵.	8	9	9	9	0	0	0	1		۲	2	'n	2	2	ω	ω	w.	4	σ	σ	8	œ	0	0	œ	46.3	7	4.
9	, st	× 6	v	₩.	ø	4	ω	w	\mathbf{r}	Q)	vo	\mathbf{r}	œ	0	w	-	0	w	w	69	w	ø	0	N	~1	~	√J	N	(J)	N	w	N	K)	4	a.	tn.	Δ	m	960	•	0
4		2 1	12	L U	13	13	10	ø	12	13	14	13	10	12	13	3	28	9	14	29	13	13	13	13	13	14	12	13	10	w	13	ü	12	13	10	14	10	12	13	12	9
F73810	·u	Y00000	T75552	U38045	1096	X3499	F33424	69352	M25423	Q89327	98	U12814	E74508	173909	U51418	272566	233847	140437	354690	K1503	J44985	J46492	J47602	J44030	39196	F73801	376171	J30092	E66535	59966	X87316	U44930	M09027	U26137	E75182	F74896	F18163	333206	BX348736	M71706	877
38105 UI-M-H		V956607 BY956607	1755527 60302738	U380453 6038612	10965 UI-M-FC0	X349997 BX34999	F334244 RC1-	693529 wd43f05.	M254238 5156	Q893273	3679	U128147	E745086	I739095	U514180	Q725661	2338477	140437	3546903	379	J449854	J464928	J476024	J440303	U391962	F738017	3761716	บ300928	E665357	599664	X873167	U449301	M090273	U261379	E751825	F748965	181631	G332068	×	M717062	528778

ALIGNMENTS

TITLE	JOURNAL PUBMED REFERENCE AUTHORS	TITLE	REFERENCE AUTHORS	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	LOCUS DEFINITION
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Direct Submission	gene trios Science 302 (5652), 1960-1963 (2003) 14671302 2 (bases 1 to 1212) 2 (bases 1, Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,	Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriere, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Inferring nonneutral evolution from human-chimp-mouse orthologous	<pre>Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1212) Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,</pre>	genomic survey sequence. AY405135 AY405135.1 GI:39761109 GSS. Homo sapiens (human) Homo sapiens	AY405135 1212 bp DNA linear GSS 16-DEC-2003 Homo sapiens FUT10 gene, VIRTUAL TRANSCRIPT, partial sequence,

```
Search completed: September 13, 2004, 05:00:11 Job time : 528.98 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1083
                                                                                                                                                                                                                                                                                                                                                                                                                                      1323 TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTGCTGCCTAACT 1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1109 GACTTCTGACAGCTCTCAGGGAACGGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATT 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023 AGGATCCAGAGCTCTTGGCTTTCTTGTCCCCGCTATAAGTTCCACTTGGCCCTGGAAAATG 1082
                                                                                                                                                                                                                                                                                                                                     1169 ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            809 ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTTGAGAATG 868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      869 CAGTITGIGATGACTACATCACTGAGAAGTTCIGGAGGCCACTGAAACIGGGGGTAGTCC 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         963 GCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCG 1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                758 GTTTACGAAACAAGACCTCCCT-----CAGCAGCTGAAAATCCAGCCTCTATGG 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               843 eéceccécceceécnacéceccécnécichárciecaércacaciéceaécereccaeceé 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     638 AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCATCATCAG 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             786 TGCCCGGGACCGCCTATCT---GCGCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGT 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC 1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGATTGATGATTTTGAGTCTCCTCAGAAGCTCGCAGAGTTTATTGACTTTCTGGACAGA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ccereraccececerrererereses de la compara de la comparada del comparada de la comparada del c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 стстататтасссантесссання спекторого структичество с стата с в в
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCATCTGTAACGACTÁCATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGGCGCTGTGC 1142
                                                                                                                                                                                                                              ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT 1426
```

```
δ
                                                                                                                                 밁
                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: PCT/US01/19153
PRIOR FILLING DATE: 2001-06-15
PRIOR APPLICATION NUMBER: US 60/212,077
PRIOR FILLING DATE: 2000-06-15
NUMBER OF SEQ ID NOS: 90
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 21
LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 12.4%;
Best Local Similarity 51.8%;
Matches 489; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
-10-184-648-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OR APPLICATION NUMBER: US 09/842,528
OR FILING DATE: 2001-04-25
OR APPLICATION NUMBER: PCT/US01/40607
OR FILING DATE: 2001-04-25
OR APPLICATION NUMBER: US 60/199,500
OR FILING DATE: 2000-04-25
OR APPLICATION NUMBER: US 09/882,836
OR FILING DATE: 2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2000-06-15
APPLICATION NUMBER: US 09/882,872
FILING DATE: 2001-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US01/19543
FILING DATE: 2001-06-15
APPLICATION NUMBER: US 60/211,730
      848
                                                                  69B
                                                                                                                                    788
                                                                                                                                                                                                       608
                                                                                                                                                                                                                                                                  728
                                                                                                                                                                                                                                                                                                                                                                                                       899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
50
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252
                                                                                                                                                                                  ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
CCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGCGCTGTGC
                                                           CAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC 928
                                                                                                                                                                                                                                                              GCCTGCAGAATCGGGAGCTGCCTACCGCGCGCGCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                             AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                          GTTTACGAAACAAAGACCTCCCT-----CAGCAGCTGAAAAATCCAGCCTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           acagggacagctargricgcgagcigatgacttacatcgaggicgattcctatggigaar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCGCCGCCGCCGCCGCCGCCGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCACGGCCCGGGCATCCGCC
                                                                                                                                                                                                                                                                                                                                                                                            ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTATTCCCCCACTTCCCGGGAGACTCGGAGCGCA-TCGAGTGTGCGCGCGCGCGCGTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCCGGGACCGCCTATCT---GCGCCGCCCGCCCTCCGCCCATGGAACGCGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        теттся дета с поста с п
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCACAGACTTCCGCGCGTCGGCCGCCCCCCCCGCGCCCCGCGCGCACCAGAGCTGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTGGTCCCCCCTGACGGGGAGACTGGGAAGGTTAGGCCAATGTGGAGCAGATGCTTGTT 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 180.8; DB 13; Length 1479;
Pred. No. 6.2e-49;
0; Mismatches 442; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
907
                                                                                                                             847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               430
                                                                                                                                                                                                                                                           787
                                                                                                                                                                                                                                                                                                                                                                                                                                                           757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310
```

US-09-844-948-1

Length 2557;

```
APPLICANT: Weyers, Rachel A.

APPLICANT: Williamson, Mark

TITLE OF INVENTION: 32132, A NOVEL FUCOSYLTRANSFERASE FAMILY

TITLE OF INVENTION: MEMBER AND USES THEREFOR

FILE REFERENCE: 10448-048001

CURRENT APPLICATION NUMBER: US/09/844,948

CURRENT FILING DATE: 2001-04-24

PRIOR APPLICATION NUMBER: US/09/804

PRIOR APPLICATION NUMBER: US/09/804

PRIOR APPLICATION NUMBER: US/09/804

PRIOR PRILING DATE: 2000-04-28

NUMBER OF SEQ ID NOS: 6

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1

LENGTH: 2557

TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-09-844-948-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09844948 Publication No. US20030119161A1
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (236)...(1711)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACTTCTGACAGCTCTCAGGGAACGGGAAATGGGGGAGTGCAAGACGTCAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC 1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGATTGATGĀTTTTGAGTCTCCTCAGAĀGCTĞĞCAGAGTTTATTGACTTTCTĞGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGTGTACCGCGGTTCTCCCTCTGAGGGACTGGATGCCGAACAATCACTCCGTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAGTGCTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          967
```

밁 δ 밁 Ş В Š 밁 Ś Ъ Ś Query Match 12.4%; Best Local Similarity 51.8%; Matches 489; Conservative 578 546 458 338 TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG 278 GGTGGTCCCCGCTGACGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT 337 TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTTGCAGTCCAAAAACA GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTG TCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC TCCTCCACGAGGAGTCGCCCCCCAACAACTTCTTGCTGAGCCACGGCCCGGGCATCCGCC TTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT GCACAGACTTCCGCGCGTCGGCCCCCCCCTGCCGCGCCTGGCGCACCAGAGCTGGGCGC o ;: Score 180.8; DB 10; Pred. No. 9e-49; 0; Mismatches 442; Indels 13; Gaps 545 577 725 517 665 457 637 785 605

	.48 ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT 1191	Db 11	
	.69 ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT 1212	Ογ 11	
147)88 TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGGGGGGG	Db 10	
168	9	Qy 11	
.087		10	
108	49 ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC 1	Ωγ 10	
027	68 TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA 1	Db 9	
048	89 TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG 1	Qy 9:	
67	08 ccereraccecederricricicirerereadedacidearecedacaarcacrecercarec 9	Db 91	
88	29 CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC 9	Οу 9:	
07	νο- Ω-	Db 8.	
28	69 CAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC 9	Qy 81	
47	88 AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCTGGAAAATG 8	Db 78	
68	œ	0у 81	
87	28 GCCTGCAGAATCGGGAGCTGCCTACCGGGGGCTACAGGACACAGCCACGGCCACCACCG 7	Db 7:	
80	_ B_	Оу 75	
27	7	Db 66	
57	98 ACAGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT 75	59 AO	_
67	08 GCGCCGCCGCGCTACGCGCCGCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG 6	Db 60	_
97	8 AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG 6	Оу 63	_
07	1. Teccceegacceccarciececcecceereccreecceccareeaaceaaceaeceae	Db 55	-
37	8 подраданительного праводного под предоставляющей в предоставления в предоставляющей в предоставляюще	Qy 57	_
50	1 TOTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC 5	Db 49	_
77	8 TGTTCAACTACACTGCCACGTTCAGCAGGCAGTTCCCACTTGCCACTAACTA	Qy 51	_
90	31 TCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCACGGCCCGGGCATCCGCC 49	Db 43	-
17	8 TITTTCATGAAGAGTCCCCGAAAAACAAITATAAGCTCTTTCATAAACCAGTGATTACCT 5	Qy 45	_
30	71 GCACAGACTTCCGCGGGTCGGCCGCCCCGCTGCCGCGCGCG	Db 37	_
57	98 GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTG 45	Оу 39	_
70	11 TGGCGTCCCGGAACCGCCGAGCGCTGAGGGACTCGCGGACGCGCGCG	Db 31	_
97	38 TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG 39	Qy 33	^
10	2 GCTATTCCCCCACTTCCCGGAGACTCGGAGCGCA-TCGAGTGTGCGCGCGCGCGCGCGCG	Db 25	-
37	78 GGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT 33	0у 27	_
3;	ch 12.4%; Score 180.8; DB 10; Length 1479; 1 Similarity 51.8%; Pred. No. 6.2e-49; 489; Conservative 0; Mismatches 442; Indels 13; Gaps	Query Match Best Local Matches 48	

RESULT 14 US-10-184-648-21 ; Sequence 21, Application US/10184648

```
APPLICAN:

APPLICANT:

APPLICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Publication No. US20 GENERAL INFORMATION:
                       OR APPLICATION NUMBER: PCT/USO2/03736
OR FILING DATE: 2002-02-08
OR APPLICATION NUMBER: US 60/267,494
OR FILING DATE: 2001-02-08
OR APPLICATION NUMBER: US 09/817,910
OR FILING DATE: 2001-03-26
OR APPLICATION NUMBER: PCT/US01/09633
OR FILING DATE: 2001-03-26
OR APPLICATION NUMBER: US 60/192,092
OR APPLICATION NUMBER: US 60/192,092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US20030224376A1
2000-03-24
```

```
RESULT 12

US-10-467-595-50

Sequence 50, Application US/10467595

Sequence 50, Application US/10467595

Publication No. US2004016501A1

GENERAL INFORMATION:

APPLICANT: DING, Li; NGUYEN, Danniel B;

APPLICANT: THANGAVELU, Kavitha; ELLIOTT, Vicki S;

APPLICANT: RAMKUMAR, Jayalaxmi; YAO, Monique G;

APPLICANT: RAMKUMAR, Jayalaxmi; YAO, Monique G;

APPLICANT: SWARNAKAR, Anita; WARREN, Bridget A;

APPLICANT: WALLA, Narinder K.; POLICKY, Jennifer L.;

APPLICANT: AU, Yunming; HONCHELL, Cynthia D;

APPLICANT: DUGGAN, Brendan M.; LU, Dyung Aina M.;

APPLICANT: GIETZEN, Kimberly J; JACKSON, Jennifer L.;

APPLICANT: KARBET, Stephanie K.; TRAN, Uyen K.;

APPLICANT: KARBET, Stephanie K.; TRAN, Uyen K.;

APPLICANT: RICHARDSON, Thomas M.; BERZELLONT, BAPCHICANT: RICHARDSON, TROMAS M.; EMERLING, Brook M.;

APPLICANT: MARCUS, Gregory A.; ZINGLER, Kurt A.;

APPLICANT: KABLE, Amy E.; GORVAD, Ann E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; NAME/KEY: misc_feature
; LOCATION: (347)
; OTHER INFORMATION: n equals a,t,g, or
US-10-242-515-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 187
LENGTH: 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 363; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 4031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/225,447
PRIOR FILING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: 60/218,290
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             532 GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           356 GGGAAGTTCTGGAGGC 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGAAGTTCTGGAGGC 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A-TGCACAGTATAAGTTTATCCTAGCTTT---GAGATGCATTTGTGATGA-NACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.2%;
96.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 323.8; DB 16; Length 378; Pred. No. 2.1e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       711
```

```
FITLE OF INVENTION: RECEPTORS AND MEMBRANE-ASSOCIATED PROTEINS
FILE REFERENCE: PF-0894 PCT
CURRENT APPLICATION NUMBER: US/10/467,595
CURRENT FILING DATE: 2003-08-06
PRIOR APPLICATION NUMBER: PCT/US02/03868
PRIOR APPLICATION NUMBER: PCT/US02/03868
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-06
PRIOR FILING DATE: 2001-02-06
PRIOR APPLICATION NUMBER: US 60/267,201
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR APPLICATION NUMBER: US 60/269,580
PRIOR FILING DATE: 2001-02-16
PRIOR APPLICATION NUMBER: US 60/282,679
PRIOR APPLICATION NUMBER: US 60/282,679
PRIOR APPLICATION NUMBER: US 60/288,295
PRIOR APPLICATION NUMBER: US 60/348,687
PRIOR PILING DATE: 2002-01-14
                                                                                                 밁
                                                                                                                                              Ş
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No: 1953366CB1
US-10-467-595-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 20.4%; Score 298; DB 17; Best Local Similarity 100.0%; Pred. No. 2.6e-88; Matches 298; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 86
SOFTWARE: PERL Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                       365
                                                                                                                                                                                                                                                                                                                                                                                                                                                    341 TCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTCTATGG 398
                                                                                                                                                       281
                                                                                                                                                                                                         305 GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 364
                                                                                                                                                                                                                                                                                                              185 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                           221 GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1550
TCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTCTATGG 482
                                                                                                    GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                 GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1550;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                304
                                                                                                                                                                                                                                                                                                                                                                                                                     244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160
```

```
US-09-84-948-3
; Sequence 3, Application US/09844948
; Publication No. US20030119161A1
; GENERAL INFORMATION:
; APPLICANT: Meyers, Rachel A.
; APPLICANT: Meyers, Rachel A.
; APPLICANT: Meyers, Rachel A.
; TITLE OF INVENTION: 32132, A NOVEL FUCOSYLTRANSFERASE FAMILY
TITLE OF INVENTION: MEMBER AND USES THEREFOR
FILE REFERENCE: 10448-048001
; CURRENT APPLICATION NUMBER: US/09/844,948
; CURRENT FILING DATE: 2001-04-24
; PRIOR APPLICATION NUMBER: US 60/200,604
; PRIOR APPLICATION NUMBER: US 60/200,604
; PRIOR FILING DATE: 2000-04-28
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
; SEQ ID NO 3
; LENGTH: 1479
TYPE: DNA
; ORGANISM: Homo sapiens
US-09-844-948-3
```

```
LENGTH: 495
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 368, 444
; OTHER INFORMATION: n = A,T,C or
US-09-814-353-9698
; Sequence 187, Application US/09764877
patent No. US20020147140A1
; GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC005
; CURRENT APPLICATION NUMBER: US/09/764,877
                                                                                                                                                          RESULT 10
US-09-764-877-187
                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: US 60/191,031
PRIOR FILING DATE: 2000-03-21
PRIOR PPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR FILING DATE: 2000-06-15
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/26,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/227,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR FILING DATE: 2000-12-21
NUMBER DE SEO 110 NOS. 2007-13
                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 22037
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 9698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 97.
                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                       377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCCACTGAAACTGGGGGT-AGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAGTITATCCTAGCTITTTGAGAATGCAGTITGTGATGACTACATCACTGAGAAGTTCTG 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCGÁGGTÁCAGTCÁGACTGTGÁCCCACCATCAGÁCAGGGACAGCTATGTTCGCGAGCT 76
                                                                                                                                                                                                                                                                                                                                                                               CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGA 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCCACTGAAACTGGGGGTAAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                         AGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGCTGAAGAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCANGGAACTGG
                                                                                                                                                                                                                                                                                                                                       CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAAGCCTATGTACAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 450.6; DB 10;
Pred. No. 6.2e-140;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                                                                                                                              376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           256
```

```
TYPE: DNA
; CRANISM: Homo sapie
; FRATURE:
; NAME/KEY: SITE
; LOCATION: (347)
; OTHER INFORMATION: n
US-09-764-877-187
CURRENT APPLICATION NUMBER: US/10/242,515
CURRENT FILING DATE: 2002-09-13
PRIOR APPLICATION NUMBER: 09/764,877
PRIOR FILING DATE: 2001-01-17
PRIOR FILING DATE: 2001-01-17
PRIOR PPLICATION NUMBER: 60/179,065
PRIOR PPLING DATE: 2000-01-31
PRIOR APPLICATION NUMBER: 60/180,628
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR FILING DATE: 2000-06-28
PRIOR PPLICATION NUMBER: 60/217,487
PRIOR APPLICATION NUMBER: 60/217,487
PRIOR PPLING DATE: 2000-08-14
PRIOR PPLING DATE: 2000-08-14
PRIOR PPLING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: 60/220,963
PRIOR PPLING DATE: 2000-07-26
PRIOR PPLING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-242-515-187; Sequence 187, Applic; Publication No. US20; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT FILING DATE: 2001-01-17
Prior application data removed - refer to PALM or file wrapper NUMBER OF SEQ ID NOS: 4031
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 187
LENGTH: 378
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC005C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 532 GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   892 GAGAAGTTCTGGAGGC 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              592 GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    652 CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    al Similarity
363; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A-TGCACAGTATAAGTTTATCCTAGCTTT---GAGATGCATTTGTGATGA-NACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10242515
b. US20040009488A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 323.8; DB 9
Pred. No. 2.1e-97;
D; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                          and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
Gi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
```

```
FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
FRIOR APPLICATION NUMBER: US 60/191,031
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR PILING DATE: 2000-07-07
PRIOR PILING DATE: 2000-07-25
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR FILING DATE: 2000-12-21
NUMBER OF SEQ ID NOS: 22037
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 16082
LENGTH: 530
                                                                                                                                                                                                                    RESULT 8
US-09-814-353-3379
                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA; Homo sapiens; ORGANISM: Homo sapiens US-09-814-353-16082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
GENERAL INFORMATION:
APPLICANT: Lee, John
APPLICANT: Thompson, Pamela
APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER
FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US/09/814,353
                                                                                                                                                                             Sequence 3379, Application US/09814353 Publication No. US20030165831A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 98.9%;
                                                                                                                                                                                                                                                                                                                                    1083
                                                                                                                                                                                                                                                                                                                                                                                                             1023
                                                                                                                                                                                                                                                                                                                                                                          430
                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
                                                                                                                                                                                                                                                                                               490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                                                                   GCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTC 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                       AAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAA 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTC 530
                                                                                                                                                                                                                                                                                                                                                                          AAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAGCTGAAGAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 453; DB 10;
Pred. No. 1e-140;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 842
                                                                                                                                                                                                                                                                                                                                                                          489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

RESULT 9 US-09-814-353-9698

495

Sequence 9698, Application US/09814353
Publication No. US20030165831A1
GENERAL INFORMATION:
APPLICANT: Lee, John
APPLICANT: Thompson, Pamela
APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER

FOR

```
LENGTH: 495

TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: 368, 444
OTHER INFORMATION: n = A,T,C or
US-09-814-353-3379
                            Š
                                                                          멍
                                                                                                                 Ś
                                                                                                                                                  망
                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: US 60/191,031
PRIOR FILING DATE: 2000-03-21
PRIOR FILING DATE: 2000-03-25
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR FILING DATE: 2000-06-15
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR FILING DATE: 2000-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 22037
SOFTWARE: FastSEQ for Windows
SEQ ID NO 3379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                     1082
                                                                            377
                                                                                                                                                             317
                                                                                                                                                                                                      962
                                                                                                                                                                                                                                              257
                                                                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                               197
                                                                                                                                                                                                                                                                                                                                                                        843
                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                                     783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            al Similarity
467; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17
                   AGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG 1140
AGCTGAANGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAAGGAACCGAAATGG
                                                                              CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAAGCCTATGTACAATGGA 436
                                                                                                    CAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGA 108:
                                                                                                                                                             GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCANGGAACTGG 376
                                                                                                                                                                                         GGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTGG 1021
                                                                                                                                                                                                                                                GAGGCCACTGAAACTGGGGGTAAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT 316
                                                                                                                                                                                                                                                                        GAGGCCACTGAAACTGGGGGT-AGTCCCTGTATATTACGGATCCCCCAGCATCACAGACT 961
                                                                                                                                                                                                                                                                                                                               TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG 256
                                                                                                                                                                                                                                                                                                                                                    TAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTG 902
                                                                                                                                                                                                                                                                                                                                                                                                               GCAGCTGAAGAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 196
                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTA 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCGAGGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGGACAGCTATGTTCGCGAGCT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30.8%; Score 450.6; DB 10; ilarity 97.5%; Pred. No. 6.2e-140; Conservative 0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

```
US-09-864-408A-7105
; Sequence 7105, Application US/09864408A
; Publication No. US20040009474A1
                                                                                                                          δ
                                                                                                                                                                  B
                                                                                                                                                                                        Ś
                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1879
                                                                                                                                                                                                                                                                                                   1519
                                                                                                                                                                                                                                                                                                                                                                                                                                   1639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                        GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                      GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTTCTCACCACCCCGGACT
                                                                                                                                                                                                                                                                                                                                                                 TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGTTCAACTACACTGCCACGTTC 2240
                                                                                                                                                                                          GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCATCACAGAC 1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAGGCATTCCCACTTGCCACTAACTACCCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGACATTGAAGTCCTGAAG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                     GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                                                                                                                                                                                                   GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2120
                                                                                                                                                                                                                                 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                     1340
                                                                                                                                                                                                    1440
                                                                                                                                                                                                                                                                                                   1460
                                                                                                                                                                                                                                                                                                                                                                                                                                 1580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1640
```

```
GENERAL INFORMATION:
APPLICANT: Leach, Martin D.
APPLICANT: Shimkets, Richard A.
ITITLE OF INVENTION: No. US20040009474A1el Human Po.
FILE REFERENCE: 21402-012
CURRENT APPLICATION NUMBER: US/09/864,408A
CURRENT FILING DATE: 2001-05-24
PRIOR APPLICATION NUMBER: 60/206,690
PRIOR APPLICATION NUMBER: 60/206,690
PRIOR PILING DATE: 2000-05-24
VUMBER OF SEO ID NOS: 9068
VUMBER OF SEO ID NOS: 9068
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 7105
LENGTH: 597
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                          RESULT 7
US-09-814-353-16082
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-864-408A-7105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 594
                                                                                                                    Sequence 16082, Application US/09814353 Publication No. US20030165831A1 GENERAL INFORMATION:
APPLICANT: Lee, John
APPLICANT: Thompson, Pamela
APPLICANT: Thompson, Pamela
APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER
                                                                                                                                                                                                                                                                      1002 TTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTG 1059
                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                   882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          462 TCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           594;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                  CTGCATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACGG
                                                                                                                                                                                                                                                                                                                                                                                                                       CTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCATGAAGAGTCCCCG-AAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGTT
                                                                                                                                                                                                                                                    TTCTCACCCCAGGGAACTGGCAAGTTATATCAGACGACTGGATTCTGATGACAGATTG
                                                                                                                                                                                                                                                                                                                        ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39.8%;
nilarity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 581.2; DB 11; Length Pred. No. 9.1e-184; O; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polynucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enco
```

Db Db RESULT 5	db Qy	B 6	Q dd	P 02 B	0	ОУ	Db Oy	dg Qy	D Qy	QY dd	Qy db	QY db	Qy	Qy Db	Db Qy	Db	
1441 GGCCTAGTATTCAAGGACTGA 1461 1878 GGCCTAGTATTCAAGGACTGA 1898	CAGGCACTAAGGTC AGGCACTAAGGTC	1321 CCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCCAGCTTTGAACAATCCAAGAAAGA	1261 GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT 1320	578 GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC 16 201 AAGGTGTGGGCTAATTATCAGGCTTCAGGAAAAAGGGCTTACCACCCAAAAGATGGGAGGCA 12 201 AAGGTGTGGGCTAATTATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA 12	1081 AAGCTGAAGGGTGAGATCTCTTAACCACGGACTTCTGACAGGTCTCACGGAACGGAACTGG 1140	1021 GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG 1080 	961 TGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG 1020 	901 TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC 960 	841 TATAAGTTTATCCTAGCTTITGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC 900 	781 CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGCCTTTTATAGGATCATTGCACAG 840	721 CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT 780	661 CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG 720	601 TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGCTTGCTCCG 660	541 AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG 600	481 AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC 540	859 TTACCTCTGCCTCGGAAAGCCCATCATGACTGGCCTGTTTTTCATGAAGAGTCCCCCGAAA 918	
Db 2419 CTCCATCATCACCAAAGCATTCCTCTTCTATGGTACTGACTTTAACATAGATAG	2479 ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC 242 361 CTCCATCATCACATGACCAAAGCATTCCTCTTCTTGTTACTTGACTTTAACATAGATAG	Db 2535 GGATCGCAGTGACAGCTACCCCATTACTCTGGTGGTCCGCTGACGGGGAACGCGAACGCTACCCCATTACTCTTCATCCATC		121 2655	Db 2775 ATGAAAGTCACGGGCCCCCAGGAGTTACAGACTCCATGCAATGCTTCAATGATCAC 2716 OY 61 TGGCCTTTATCTAACACCAGGAGCAGCACCATAAAAGAGGTCATGGTTGAGCTGGGG 120	18; Conservative 0; Mismatches 9; Indels 4; Gaps L ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG	US-09-814-353-20757 Ouery Match Pest Local Similarity 99.1%; Pred. No. 0: Rest Local Similarity 99.1%; Pred. No. 0:	FEATURE: HOW Saprous FEATURE: FEATURE: LOCATION: n = A T.C or G	SEO ID NO 20757 LENGTH: 2937 TYPE: DNA COCANICA: CARLEDGE CO. C.	PRIOR FILING DATE: 2000-07-25; PRIOR APLICATION NUMBER: US 60/257,672 PRIOR FILING DATE: 2000-12-21 NUMBER OF SEQ ID NOS: 22037 NUMBER OF SEQ ID NOS: 22037	; PRIOR PILLING DALE: 2000-00-15; ; PRIOR APPLICATION NUMBER: US 60/216,820 ; PRIOR FILING DATE: 2000-07-07 ; PRIOR APPLICATION NUMBER: US 60/220,661	; PRIOR APPLICATION NUMBER: US 60/207,124 ; PRIOR APPLICATION NUMBER: US 60/211,940 ; PRIOR APPLICATION NUMBER: US 60/211,940	CURRENT EPILICATION NUMBER: US/09/814,353; CURRENT FILING DATE: 2001-03-21; PRIOR APPLICATION NUMBER: US 60/191,031	TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND TITLE OF INVENTION: THERAPY OF OVARIAN CANCER	GENERAL INFORMATION: APPLICANT: Lee, John APPLICANT: Thompson, Pamela	US-09-814-353-20757/c Sequence 20757, Application US/09814353 Dishiparion No. US2002015583181	

```
1698
                                                                                                                                                                                 1638
                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                                       1141
                                                                                                                                                                                                                                                                                                                                                                      1519
                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGATACCCACCTGAGTTGCCCCAGAGCCCACAGTGTTTGCTTTCTCACCACCCCGGACT 1320
                                                                                                                                                                                                                                                                                                                                                                                              AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGG 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCCTATGTAGAATGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCG 1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACAATTATAAACCTCTTTCATAAACCAGTGATCACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCCGAAA 480
                                                                                                                                                                                                                           AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAAGGGCCTTACCACCCAAAAGATGGGAGGCA 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGAGGCCACTGAAACTGGGGGTAGTCCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGTGTATGTACAGTCATACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC 540
GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                 AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCCTTACCACCCAAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                            GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                       GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC 1200
                                                                                                                                                                                                                                                                                                                                                                   AAGCTGAAGGGT-AGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTTCTCACCCCAGGGAACTG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                       1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   858
                                                                                                                                                                                 1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           798
1817
                                                                                                                                                                                                                                                                            1637
                                                                                                                                                                                                                                                                                                                                                                      1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
```

GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG 1440

1877

421

TTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA 480

밁

Ş

40 40 40 δ

```
APPLICANT: Dougueleret, Lydie
APPLICANT: Bougueleret, Lydie
APPLICANT: Dobert, Severin
ITILS OF INVESTION: FULL-LENGTH HUMAN CDNAS ENCODING POTENTIALLY SECRETED PROTEINS
FILE REFERENCE: 78.US4.CIP
CURRENT APPLICATION NUMBER: US/09/876,997
CURRENT FILING DATE: 2001-06-08
PRIOR APPLICATION NUMBER: US 09/731,872
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR APPLICATION NUMBER: US 60/187,470
PRIOR FILING DATE: 2000-12-07
PRIOR FILING DATE: 2000-12-08
PRIOR FILING DATE: 1999-12-08
VUMBER OF SEQ ID NOS: 482
SOFTWARE: Patent.pm
SEQ ID NO 43
LENGTH: 1942
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:

NAME/KEY: CDS
LOCATION: 334..1551
NAME/KEY: sig peptide
LOCATION: 334..426
OTHER INFORMATION: Von Heijne matrix
OTHER INFORMATION: score 4.0554926521937
OTHER INFORMATION: seg TVFLLVTLQALDT/VE
US-09-876-997-43
밁
                              Š
                                                                片
                                                                                         5
                                                                                                                              밁
                                                                                                                                                           Ś
                                                                                                                                                                                           片
                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
US-09-876-997-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 43, publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 1458; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1441 GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1878
   799
                                 361
                                                                  739
                                                                                                301
                                                                                                                                679
                                                                                                                                                               241
                                                                                                                                                                                             619
                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                             559
                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                          499
                                                                                                                                                                                                                                                                                                                                                                                         439
                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                             TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGGCCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                               ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
     ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                               AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG
                                                                                                                                                                                             GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                     GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                               AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                            TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                         ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                  ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09876997
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTAGTATTCAAGGACTGA 1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1445.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                     420
                                                                                                  360
                                                                                                                                                                300
                                                                                                                                                                                               678
                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                               618
                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                        60
     858
                                                                   798
                                                                                                                                738
                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                            558
                                                                                                                                                                                                                                                                                                                                                                                         498
```

```
1123
                                                                                                                                                                                                                                                                                1063
                                                                                                                                                                                                                                                                                                                              1003
                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                             943
                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                             883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTACCACCACTCCGGACT
                                                                                                                                  AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                 GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                 GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATTG
                                                                                                                                                                                                   GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTCTTCACCATCAACCGGACCTAC
                                                                                    GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                               TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                            TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                             CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                               TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                             TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                            CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGAG
               1320
                                                            1260
                                                                                    1362
                                                                                                           1200
                                                                                                                                  1302
                                                                                                                                                          1140
                                                                                                                                                                                   1242
                                                                                                                                                                                                        1080
                                                                                                                                                                                                                                  1182
                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                1122
                                                                                                                                                                                                                                                                                                        960
                                                                                                                                                                                                                                                                                                                               1062
                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                               1002
                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                             942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                뫄
                                                       Ş
                                                                                맑
                                                                                                   Ş
                                                                                                                               밁
                                                                                                                                                     Ş
                                                                                                                                                                                 밁
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
US-09-731-872-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유정
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 1458; Conserv
                                                                                                            181
                                                                                                                                                                                   499
                                                                                                                                                                                                                                  439
                                                                                                                                                          121
                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                1 ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG 60
                                                                                                                                                                                                     TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGG 120
                                     GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                  GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA 240
                                                                                                                                  AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                 AAGTTTGAAAGGAAGGAGTTTAAAAGTTTCCAGTTTGCAAGATGGACATACAAAAATGGAG 180
                                                                                                                                                                                 TGGCCTTTATCTAACACCAGGAGCAGCAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                  ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTCTCACCACCTCCGGACT 1482
                                                                                                                                                                                                                                                                                Conserval
                                                                                                                                                                                                                                                                                ive
                                                                                                                                                                                                                                                                                          99.0%;
                                                                                                                                                                                                                                                                            Score 1445.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                       Length 1942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIALLY SECRETED
                                                                                                                                                                                                                                                                                ۲.
                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                  498
                                                            300
                                                                                    678
                                      738
                                                                                                                                     618
                                                                                                                                                                                    558
```

유정

유

성 암

5 B 5 B 5

밁

g Ş В Ş Дb δõ В δ Вb Ş D Ś B Ş 멼 8 B 8 밁 Ş b 80

```
1021
                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                     GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAATGATTGACCTTCAACAGGAAA
GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC 1200
                                                                                                                                                                                                                                                            TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCCTTTATCTAACACCAGGAGCAGCAGCACATAAAAGAGGTCATGGTTGAGCTGGGG 120
                                                                      AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG 1140
                                                                                                                                                                                                                                                                                                                                TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                             AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                       GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                      TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                              TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                            TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                             1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
```

8 밁 Š 밁 8 Ś 밁 Ś 밁 Ś 밁 Ş 밁 Ş B S 밁 Ş B 8

D, Š

Š

δ 片 S 밁 S B Ş Дb Ş 片 δ

```
FILE REFERENCE: 38155-20044.00

CURRENT APPLICATION NUMBER: US/10/080,960

CURRENT FILING DATE: 2001-10-19

PRIOR APPLICATION NUMBER: US 60/242,040

PRIOR APPLICATION NUMBER: US 60/242,038

PRIOR APPLICATION NUMBER: US 60/242,038

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR FILING DATE: 2000-10-23

NUMBER OF SEQ ID NOS: 37

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1

SEGUINE: NAME/KEY: CDS

COCANISM: Homo sapiens

PEATURE:
NAME/KEY: CDS

LOCATION: (163)...(1623)

US-10-080-960-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                              밁
                                                             Ś
                                                                                                 밁
                                                                                                                          8
                                                                                                                                                                   밁
                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
US-10-080-960-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/10080960
Publication No. US20020197695A1
GENERAL INFORMATION:
APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Glucksmann, Maria
APPLICANT: Meyers, Rachel
TITLE OF INVENTION: 80090, 52874,52880,63497, AND 33425
TITLE OF INVENTION: METHODS AND COMPOSITIONS OF HUMAN PROTEINS
                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 1461; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                     163
181
                                                                                                                                   61
                                                                                               ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                  AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                           AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATTGGACATACAAAAATGGAG
                                                                                                                                                                     ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                                                                                                                                                    100.0%; S ilarity 100.0%; P Conservative 0;
                                                                                                                                                                                                                                     Score 1461;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                         14;
                                                                                                                                                                                                                                       ٠,
                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                      Length 1669;
                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND USES
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
   240
                                   342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1260
                                                                    180
                                                                                                    282
                                                                                                                                    120
                                                                                                                                                                       222
                                                                                                                                                                                                       60
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                  1445
1445
1428
541
545
450
450
323
323
8
323
8
323
8
                                                                                                                                                                                                                                                                                                                                                                Score
       180.8
                                                                                                                                                                                                                                                                                                                                                         Query
Match Length DB
     100.0
100.0
99.0
97.8
31.0
31.0
30.8
30.8
122.2
222.2
122.4
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-080-960-3
1461
1 atgaaagtcacgggccctcc.....gcctagtattcaaggactga 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3304383 seqs, 2515761380 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     September 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna

2: /cgn2_6/ptodata/1/pubpna

3: /cgn2_6/ptodata/1/pubpna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      //cgn2_6/ptodata/1/pubpna/US06_NEW PUB.seq:*
//cgn2_6/ptodata/1/pubpna/US06_NEW PUB.seq:*
//cgn2_6/ptodata/1/pubpna/US06_NEW PUB.seq:*
//cgn2_6/ptodata/1/pubpna/US06_NEW PUB.seq:*
//cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
//cgn2_6/ptodata/1/pubpna/US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd
                                                  2004, 00:41:56 ; Search time 498.98 Seconds (without alignments)
14732.148 Million cell updates/sec
                                                                                                                                                                                                                                                                      14
9
          110
  10 US-09-814-353-20757

10 US-09-864-408A-7105

10 US-09-814-353-16082

10 US-09-814-353-3379

10 US-09-814-353-9698

9 US-09-814-353-9698

9 US-09-764-897-187

16 US-10-242-515-187

17 US-10-467-595-50

10 US-09-844-948-3
                                                                                                                                                                                                                                          US-10-080-960-3

US-10-080-960-1

US-09-731-872-43

US-09-876-997-43
                                                                                                                                                                                                                                                                                                                                                                   IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pubpna/US07_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6608766
Sequence 3, Appli
Sequence 1, Appli
Sequence 43, Appl
Sequence 43, Appl
Sequence 20757, A
Sequence 7105, Ap
Sequence 16082, A
Sequence 379, Ap
Sequence 9698, Ap
Sequence 187, App
Sequence 187, App
Sequence 187, App
Sequence 50, Appli
Sequence 21, Appli
Sequence 21, Appli
                                                                                                                                                                                                                                                                                                                                                              Description
```

ALIGNMENTS

US-10-080-960-3

0 0 0 0 0 0

```
Sequence 3, Application US/10080960

Publication No. US20020197695A1

Publication No. US20020197695A1

APPLICANT: MILIENTIUM Pharmaceuticals, Inc.

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Meyers, Rachel

ITITLE OF INVENTION: METHODS AND COMPOSITIONS OF

FILE REFERENCE: 38155-20044.00

CURRENT APPLICATION NUMBER: US/10/080,960

CURRENT FILING DATE: 2001-10-19

PRIOR APPLICATION NUMBER: US 60/242,040

PRIOR APPLICATION NUMBER: US 60/242,040

PRIOR APPLICATION NUMBER: US 60/242,038

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR APPLICATION NUMBER: US 60/241,992

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: US 60/242,637

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-
    밁
                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                US-10-080-960-3
                                                                                                                                                                                        Matches 1461; Conservative
                                                                                                                                                                                                                                    Query Match
Best Local :
                                                           1 ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG 60
                                                                                                                                                                                                                                    Similarity
#TGABAGTCACGGGCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                   100.0%; Score 1461;
100.0%; Pred. No. 0;
htive 0; Mismatches
                                                                                                                                                                                                                                                                                      DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND 33425
OF HUMAN
                                                                                                                                                                                        0;
                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                 Length 1461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEINS
                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND USES THEREOR
                                                                                                                                                                                            Gaps
         60
```

This Page Blank (uspto)

Job time : 80.8182 secs

```
망
                                                                                        Ś
                                                                                                                                                                                                                                              ; NAME/KEY:
; LOCATION:
US-08-155-331-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-08-155-331-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12
Patent No.
                                                                                                                                                                                     Matches
                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 206-548-2329
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Foster, Donald C
APPLICANT: Sprecher, Cindy
APPLICANT: No. 5441931ris, Kjeld
APPLICANT: No. 5441931ris, Kjeld
TITLE OF INVENTION: NOVEL HUMAN AMYLOID PROTEIN PRECURSOR
TITLE OF INVENTION: HOMOLOG AND KUNITZ-TYPE INHIBITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 92-21CI
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-547-8080 ext 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/155,331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALUCIA STREET: SEATTLE CITY: Seattle
                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                         IMMEDIATE SOURCE:
CLONE: APPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                          ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Parker, Gary E REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
 1648
                             484
                                                                                                                                                 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484 AATTATAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12, Application US/08155331
5. 5441931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81 AAATCCCAGGT 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98105
                                                          CATACCATCCGTCATTACCAGCATGTGTTGGCTGTTGACCCAGAAAAGGCGGCCCAGATG 1647
AAATCCCAGGT 1658
                           AATTATAAGCT 494
                                                                                      CCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAC 483
                                                                                                                     CCTCATCGCATTCTCCAGGCCTTACGGCGTTATGTCCGTGCTGAGAACAAAGATCGCTTA 1587
                                                                                                                                                                                                                                                                                                                                                                                                                                 3725 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: ZymoGenetics, Inc.
4225 Roosevelt Way, N.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                             CDS
73..2364
                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                2.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-684
                                                                                                                                                                                Score 35; DB 1
Pred. No. 0.4;
0; Mismatches
                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92-21C1
                                                                                                                                                                                                              DB 1; Length 3725;
                                                                                                                                                                                  60; Indels
                                                                                                                                                                               0,
                                                                                                                                                                               Gaps
                                                                                                                                                                                  0
```

```
Query Match
Best Local Similarity
Theohes 71; Conserve
밁
                              ş
                                                                  밁
                                                                                                 Ş
                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-08-424-022-12
                                                                                                                                                                                                                                                                       US-08-424-022-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION UNUBER: US 07/985,692

FILING DATE: 02-DEC-1992

ATTORNEY/AGENT INFORMATION:

NAME: Parker, Gary E

REGISTRATION NUMBER: 31-684

REFERENCE/DOCKET NUMBER: 92-21C2

TELECOMMUNICATION INFORMATION:

TELEPHONE: 206-547-8080 ext 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12, App...
Sequence 12, App...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No. 5677146
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 206-548-2329
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 3725 base pair
                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CD
ORIGINAL SOURCE:
ORGANISM: Homo
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                        CLONE: APPH FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/424,022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Foster, Donald C
APPLICANT: Sprecher, Cindy,
APPLICANT: No. 5677146ris, Kjeld
TITLE OF INVENTION: NOVEL HUMAN AMYLOID PROTEIN PRECURSOR
TITLE OF INVENTION: HOMOLOG AND KUNITZ-TYPE INHIBITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
1648
                                                                                                                                   1528 CCTCATCGCATTCTCCAGGCCTTACGGCGTTATGTCCGTGCTGAGAACAAAGATCGCTTA 1587
                                                                                                                                                              98105
                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid
DEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seattle
                                                                                                 CCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAAC 483
AAATCCCAGGT 1658
                              AATTATAAGCT 494
                                                               CATACCATCCGTCATTACCAGCATGTGTTGGCTGTTGACCCAGAAAAGGCGGCCCAGATG 1647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08424022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4225
                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                      CDS
73..2364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZymoGenetics, Inc.
25 Roosevelt Way, N.E.
                                                                                                                                                                                                                                                                                                                                                                                                           CDNA
                                                                                                                                                                                                                   54.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12:
                                                                                                                                                                                                    0,
                                                                                                                                                                                                                     Score 35; DB 1; Length 3725; Pred. No. 0.4;
                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                    60;
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                    0
                                                                                                                                                                                                 Gaps
```

Search completed: September 13, 2004, 02:21:05

Gaps

```
RESULT 12
US-09-604-287A-401/c
; Sequence 401, Application US/09604287A
; Patent No. 6586572
                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-433-826B-401/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-433-826B-401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 71
                                                                                                                                                                                                  GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity Matches 71; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY: misc_feature
LCCATION: (1)...(241)
OTHER INFORMATION: n = i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
APPLICANT: Jiang, Yuqiu
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Xu, Jiangchun
APPLICANT: Harlocker, Susan L.
APPLICANT: Hepler, William T.
APPLICANT: Hepler, William T.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 241
                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364 САТСАТСАСАТВАССАЛАВСАТТССТСТТСТАТВСТАСТВАСТТАВСАТАВАТАВСТТА 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401, Application US/09433826B
o. 6579973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATACCATCCGTCATTACCAGCATGTGTTGGCTGTTGACCCAGAAAAGGCGGCCCAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccicaticg catrotica decinia con contration confector de la calacate de la contration de la calacate de la calac
                                                                                                                                                                                                                                                                                                                                                                                                                  AATTATAAGCT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCATCGCATTCTCCAGGCCTTACGGCGTTATGTCCGTGCTGAGAACAAAGATCGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATTATAAGCT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTCTGCCTCGGAAAGCCCGATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATACCATCCGTCATTACCAGCATGTGTTGGCTGTTGACCCAGAAAAGGCGGCCCAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAATCCCAGGT 71
                                                                                                                                                                                                                                                                                                                                                                      AAATCCCAGGT 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jiang, Yuqui
Dillon, Davin C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A,T,C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 35; DB 4
Pred. No. 0.04;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 0.04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4; Length 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          METHODS FOR THEIR USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                              THERAPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                   LENGTH: 241
; TYPE: DNA
; ORGANISM: Homo sapiens
; PEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(241)
; OTHER INFORMATION: n = A,T,C or G
US-09-834-759-401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 210121.470C7
CURRENT APPLICATION NUMBER: US/09/604,28:
CURRENT FILING DATE: 2000-06-22
NUMBER OF SEQ ID NOS: 489
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 401
LENGTH: 241
LENGTH: 241
CRGANISM: Homo sapiens
FEATURE: NAME/KEY: misc_feature
LOCATION: (1)...(241)
OTHER INFORMATION: n = A,T,C or G
                                   ద
                                                                     8
                                                                                                                           밁
                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-09-834-759-401/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-604-287A-401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Jiang, Yuqiu
APPLICANT: Dillon, Davin C.
APPLICANT: Miccham, Jennifer L.
APPLICANT: Xu, Jiangchun
APPLICANT: Harlocker, Susan L.
APPLICANT: Hepler, William T.
APPLICANT: Henderson, Robert A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/834,759
CURRENT FILING DATE: 2001-04-13
NUMBER OF SEQ ID NOS: 547
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 401,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                      Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Xu, Jiangchun
APPLICANT: Harlocker, Susan L.
APPLICANT: Hepler, William T.
APPLICANT: Hepler, William T.
APPLICANT: Henderson, Robert A.
APPLICANT: Henderson, Robert A.
APPLICANT: HENDERSON AND METHODS FOR TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER FILE REFERENCE: 210121.47009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    424 CCTCTGCCTCGGAAAGCCCATCATGACTGGCCTGTTTTCATGAAGAGTCCCCGAAAAAC 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141
                                                                                  424
                                                                                                                                201
                                                                                                                                                                           201 CCTCATCGCATTCTCCAGGCCTTACGGCGTTATGTCCGTGCTGAGAACAAAGATCGCTTA 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 2.4%;
l Similarity 54.2%;
71; Conservative
                                                                                                                                                                                                                               71;
                                                                                                                                                                                                                               h 2.4%; Score 35; DB Similarity 54.2%; Pred. No. 0.0471; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6680
                                   CATACCATCCGTCATTACCAGCATGTGTTGGCTGTTGACCCAGAAAAGGCGGGCCCAGATG 82
                                                                     CCTCTGCCTCGGAAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAAC 483
                                                                                                                                CCTCATCGCATTCTCCAGGCCTTACGGCGTTATGTCCGTGCTGAGAACAAAGATCGCTTA 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATTATAAGCT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09834759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09/604,287A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Score 35; DB .; Pred. No. 0.04 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                    റ
                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4; Length 241;
                                                                                                                                                                                                                                                        .04;
                                                                                                                                                                                                                                 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THE
                                                                                                                                                                                                                                                                             Length 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THERAPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                 0
```

Gaps

```
CURRENT APPLICATION NUMBER: US/09/621,976; CURRENT FILING DATE: 2000-07-21; NUMBER OF SEQ ID NOS: 19335; SOPTWARE: Patent.pm; SEQ ID NO 16656; LENGTH: 430; TYPE: DNA; ORGANISM: Homo sapiens
US-09-621-976-16656
뮍
                                           Ś
                                                                                            밁
                                                                                                                                      Š
                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-579-664B-2
                                                                                                                                                                                                                                                                                                                                                                                        US-09-579-664B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/579,664B
CURRENT FILING DATE: 2000-05-26
NUMBER OF SEQ ID NOS: 36
SOFTWARE: Patentin version 3.1
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/09579664B Patent No. 6514719
                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Immunex Corporation
APPLICANT: Bird, Timothy A.
APPLICANT: Virca, G. Duke
APPLICANT: Martin, Unja
APPLICANT: Martin, Unja
APPLICANT: Maderson, Dirk M.
APPLICANT: NOVEL MURINE AND HUMAN KINASES
FILE REFERENCE: 2923-A
                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 1060
TYPE: DNA
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                        y Match 2.4%;
Local Similarity 55.0%;
hes 94; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1196 GCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGG 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1136 AATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGT 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1256 AGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCC 1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   389
                                                                                               371
                                                                                                                                                                                                                                          719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 2.5%; Score 36; DB 4; l Similarity 18.6%; Pred. No. 0.028; S1; Conservative 108; Mismatches 1
                                                                                                                                           CTCAGCAGCTGAAAATCCAGCCTCTATGGATGCCGATGGCTTTATAGGATCATTGCAC 838
                                                                                                                                                                                            AGATATTTGATTTAATGGATGCCAAAGCACGTGCTGATTGTATCAAAGAAATAGACCTCC 370
                                                                                                                                                                                                                                       AGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAAACAAAGACCTCC 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGAT 1407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MWKGKYYYYKSYYYKGGGGKYYKKYMARKKGSCCMWKKYYTYMRRRGGKWRSYKGGSCMM 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --GGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGGATTTCCAGCTTTGAACAATCCAA 1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGGTGTCATTGAAGCCCTYCCSSMRKWMSKKSMRRRGKKSCYYYTKRMSKYSKTKKKRM 330
                                           AGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCA 889
                                                                                          TTAAGCAACTCAACCATCCAAATGTAATTAAATACTATGCATCAT----TCATTGAGG 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CMMMMMRGSCCSGGGGSCMWKSYKKWRSYWRRRK 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAACAGGTYYCMMYKGGRMYKKYCCCMARGGKYMMCYTYMWYYTKGKKSSSMRGRARSC 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MMYTYMWKKKGSSGKTYMRCATGCGCTGGTAGGTGAAGGCCTTCTGGCAGACACGGCAGG 270
                                                                                                                                                                                                                                                                                      Score 35.4; DB 4; Length 1060; Pred. No. 0.1; 0; Mismatches 71; Indels 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4; Length 430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               113; Indels
                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

```
GENERAL INFORMATION:

APPLICANT: Yugui, Jiang
APPLICANT: Dillon, Davin C.

APPLICANT: Mitcham, Jennifer L.

APPLICANT: Mitcham, Jennifer L.

APPLICANT: MItcham, Jennifer L.

APPLICANT: MITCHAM, Jennifer L.

TITLE OF INVENTION: COMPOSITIONS FOR THE TREATMENT AND

TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER AND MET

TILE REFERENCE: 210121.470C3

CURRENT APPLICATION NUMBER: US/09/389,681A

CURRENT FILING DATE: 1999-09-02

NUMBER OF SEQ ID NOS: 463

SOFTMARE: FastSEQ for Windows Version 3.0

SEQ ID NO 401

LENGTH: 241

TYPE: DNA

COLUMN AND ACCOUNTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens; FEATURE; MAME/KEY: misc_feature; LOCATION: (1)...(241); OTHER INFORMATION: n = A,T,C US-09-389-681-401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-620-405B-401/c
; Sequence 401, Application
; Patent No. 6528054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
US-09-389-681-401/c
                                        US-09-620-405B-401
                                                                                                                                                                              FILE REFERENCE: 210121.470C8
CURRENT APPLICATION NUMBER: US/09/620,405B
CURRENT FILING DATE: 2000-07-20
NUMBER OF SEQ ID NOS: 495
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 401
LENGTH: 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 401, Application US/09389681A Patent No. 6518237
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Jiang, Yuqiu
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                     APPLICANT: Xu, Jiangchun
APPLICANT: Harlocker, Susan L.
APPLICANT: Hepler, William T.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
                                                       NAME/KEY: misc_feature
LOCATION: (1)...(241)
OTHER INFORMATION: n =
                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                        FEATURE:
                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 2.4%; Local Similarity 54.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424 CCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAAC 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATTATAAGCT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAATCCCAGGT 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATACCATCCGTCATTACCAGCATGTGTTGGCTGTTGACCCAGAAAAGGCGGCCCAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTCATCGCATTCTCCAGGCCTTACGGCGTTATGTCCGTGCTGAGAACAAGATCGCTTA 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                          #
#
                                                            A, T, C
  2.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09620405B
                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 မ္မ
  Score 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 35; DB 4
Pred. No. 0.04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
  DB
  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 241;
                                                                                                                                                                                                                                                                                                                                               HHE
Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND
METHODS FOR THEIR USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
```

```
; STRANDEDNESS:
; TOPOLOGY: line
; MOLECULE TYPE: C
US-08-483-151-1
В
                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-483-151-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-621-976-18033
                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence 1, Application US/08483151
Patent No. 5858752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 14.0%; Pred. No. 0.02 Matches 31; Conservative 100; Mismatches
                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Ve CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,151
FILING DATE: 07-JUN-1995
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Lech, Karen F.
REGISTRATION NUMBER: 35,238
REFERENCE/DOCKET NUMBER: 00786/2780
                                                                                                                                                                                                                                                                      TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: n=a, g, c
                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 1814 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Seed, Brian
APPLICANT: Holgersson, Jan
TITLE OF INVENTION: FUCOSYLTRANSFERASE GENES AND USES THEREOF
NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 617/542-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                          TELEFAX:
 980
                                     833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162 RKKSYKRWTKGKKKKKTTWMMAAMCYTTWRSYWMMMRRAAAAKTYYYCMMSKTMCCMAC 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             102 KTKSCMAGRWKGKYYYSRWYYYCYKGACYYMWKRWYCSSCCMMYTKGGGSMWTTTWMMRR 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            653 TTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATG
                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Boston
                        TTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTG 892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WKGSCMWKRAWWARKTTYYTWAWYYTTYYKRMCCYYMRKTTY 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTT 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCMMCCMRRARSCCMRSYTYMMCYYYYMMYKGGRMYWWWRGGMWKRMYWMYKKKSM 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCA 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAG 772
   TGGCCCGGTACCGCTTCTACCTGGCCTTTGAGAACTCACAGCATCGGGACTACATCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MA
                                                                                                                                                                                                                                                                                                          617/542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                          Conservative
                                                                                                                                                                              S: single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.5%;
                                                                                     68.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ဝူ
                                                                                                                                                                                                                                                                                                                                                               00786/278001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 36.4; DB 4; Pred. No. 0.022;
                                                                      Score 36.2; DB Pred. No. 0.08; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Version #1.30
                                                                                                          DB 2;
                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 474;
                                                                                                          Length 1814;
                                                                          Indels
                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ·,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                          Gaps
   1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                712
                                                                          0
```

```
뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
PCT-US96-06427-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
US-09-621-976-16656/c
             RESULT 7
                                                     В
                                                                            Ş
                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                        PCT-US96-06427-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application PC/TUS9606427 GENERAL INFORMATION:
                                                                                                                                                                Matches
                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                      TELEX: 200154
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                              ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PACENTIN Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4
FILING DATE: 07-JUN-1995
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Lech, Karen F.
                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: The General Hospital TITLE OF INVENTION: FUCOSYLTRANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                               Local
                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US96/06427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                          ENGTH:
                                                      1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1040 AGAAGTTCTGGCG 1052
                                                                               893 AGAAGTTCTGGAG 905
                                                                                                             980
                                                                                                                                      833 TTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTG 892
                                                                                                                                                                50;
                                                                                                                                                                             2.5%;
Similarity 68.5%;
                                                                                                                                                                                                                                                                         nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boston
                                                      AGAAGTTCTGGCG 1052
                                                                                                             TGGCCCGGTACCGCTTCTACCTGGCCTTTGAGAACTCACAGCATCGGGACTACATCACTG 1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAAGTTCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MA
                                                                                                                                                                                                                                                                                         1814 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                     linear
: cDNA
                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ral Hospital Corporation FUCOSYLTRANSFERASE GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/483,151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  905
                                                                                                                                                                                                                                                                                                                     1.
                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                          00786/278WO1
                                                                                                                                                                               Score 36.2; DB Pred. No. 0.08;
                                                                                                                                                                  Mismatches
                                                                                                                                                                                            DB 5;
                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND USES
                                                                                                                                                                                            Length 1814;
                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THEREOF
                                                                                                                                                                   0
                                                                                                                                                                  Gaps
                                                                                                                                                                   0
```

Sequence 16656, Application US/09621976 Patent No. 6639063

INFORMATION:

APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTs and Encoded Human Proteins.
FILE REFERENCE: GENSET.054PR2

DORNER, F.

```
밁
                                                                                        Š
                                                                                                                          밁
                                                                                                                                                       Ş
                                                                                                                                                                                         밁
                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                ; IMMEDIATE SOURCE:
; CLONE: pTZgpt-F1s
US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (705,000)
TELEX: 899149
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
FENGTH: 7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: EP 91
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic STRANDEDNESS: TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                Watch 3.0%; Score 44; DB 1; Length 7218; Local Similarity 9.5%; Pred. No. 0.00037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 1800 Diag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLICANT: FALKNER, F. G.
                                                                                                                                                                                                                                                                                                                     AACGAA 1003
                              AAAGCA 384
                                                              AGCTACCCCATTATGCTCTGGTGGTCCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAA 318
                                                                                                                                                                                         AATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGAC 258
                                                                                                                                                                                                                                                                                       TTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTT 198
                                                                                          Conservative 151; Mismatches 126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCHEIFLINGER, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TUMBER: EP 91 114 300.6
26-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-621-976-18033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; FEATURE:
; NAME/KEY: CDS
; LOCATION: 235..399
US-09-621-976-2813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-621-976-2813
                                                                           NUMBER OF SEQ ID NOS: 19335
SOFTWARE: Patent.pm
SEQ ID NO 18033
LENGTH: 474
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patent.pm
SEQ ID NO 2813
LENGTH: 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2813, Application US/09621976
Patent No. 6639063
GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards, J.B.
                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards,
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 18033, Ap
Patent No. 6639063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                             APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTS and Encoded Human Proteins.
FILE REFERENCE: GENSET.054PR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTs and Encoded Human Proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: GENSET.054PR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 19335
NAME/KEY: misc_feature
                                                      ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 2.8%; Score 41.4; DB 4; Local Similarity 10.1%; Pred. No. 0.00054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1076 AATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGA 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1016 AACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAG 1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313 CWARMYRYSTGTRASMWWRRWYYTMMMKWWKYAWARAAWRWWAMWWAWRRACAAAAT 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133 TTCYSSKGWTWWKRWKKAWTTWWWKKTYYWAATRYWWMMCWTKRWRASWWYCWWWGKARK 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               896 AGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            956 CAGACTGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGG 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WSTWRKSRSYASARSAKRCCYSCSWGAMSWKYMWRMWRWRGWATGAGMKAWRASCMMRRK 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGGCTTACCACCCAAAAGAT 1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YAGKSKTSYKSMWMCWTRSWKYCYTKARWTGYYCYRKGGMWGKRGRWYASKKYMWKRWWW 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGT 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MCRTKTKKKKKKGYMWMWYWGWRRSYMAMWTRTWTGYAYYRSMMYWWRYRCWKKKAYYRK 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AKCWTKWKWSYSYWYYWKWYYMKTYWRWRRKKKKAWWKYWKTWTWWYWRYAMWGTYKKKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative 165; Mismatches 156;
                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09621976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 832;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72
```

N

1, Appli 1, Appli 1, Appli 14, Appli 1065, Appli 10, Appli 11, Appli 13, Appli

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                            0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                      U
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
9
             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                   230.
         seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-080-960-
1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      September 12, 2004, 21:46:05; Search time 79.8182 Seconds (without alignments)
10157.873 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682709 segs, 277475446 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 atgaaagtcacgggccctcc.....gcctagtattcaaggactga 1461
         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000000000
         GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
      US-09-621-976-12473
US-09-621-976-2813
US-09-621-976-18033
US-09-621-976-18033
US-09-621-976-16656
US-09-621-976-16656
US-09-621-976-16656
US-09-621-976-16656
US-09-389-681-401
US-09-621-405B-401
US-09-621-405B-401
US-09-621-405B-401
US-09-621-405B-401
US-09-621-405B-401
US-09-621-405B-401
US-09-621-405B-401
US-09-621-287A-401
US-09-621-287A-401
US-09-621-281-12
US-08-424-017B-12
US-08-525-058A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1365418
      Sequence 12473, A
Sequence 2813, Appl
Sequence 2813, Appl
Sequence 1 Appli
Sequence 1 Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 401, App
Sequence 12, Appl
Sequence 14, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 17, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 11, Appli
Sequence 11, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12473, Application US/09621976

Patent No. 6639063

GENERAL INFORMATION:

APPLICANT: Dumas Milne Edwards, J.B.

APPLICANT: Jobert, S.

APPLICANT: JOSERT. DS4PR2

CURRENT APPLICATION NUMBER: US/09/621,976

CURRENT FILING DATE: 2000-07-21

NUMBER OF SEQ ID NOS: 19335

SOFTWARE: Patent.pm

SEQ ID NO 12473
RESULT 2
US-08-32-463-14/c
15-08-32-463-14/c
; Sequence 14, Application US/08232463
; Patent No. 5670367
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 450
; TYPE: DNA
; ORGANISM: Homo s:
US-09-621-976-12473
                                                                                                                                         Ś
                                                                                                                                                                           В
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
US-09-621-976-12473
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 15.8%;
Best Local Similarity 96.7%;
Matches 235; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1339
                                                                                                                                                                                                                                                                                                                                        1279
                                                                                                                                                  1459
                                                                                                                                                                                                                                                                                                                                                                                        1219 AGGCTTCAGGAAAAAGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                311
                                                                                                                                                                                 251
                                                                                                                                                                                                                                               191
                                                                                                                                                                                                                                                                                                            131 TGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG
                                                                                                                                                                                                                                                                                                                                                                        71 AGGCAAGGAAATAGGGGCTTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGT 130
                                                                                                                                                TGA 1461
                                                                                                                                                                                 CTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGAC 310
                                                                                                                                                                                                          CTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGAC 1458
                                                                                                                                                                                                                                                TGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTG 1338
                                                                                                                       313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-696-731-1
US-09-042-531-1
PCT-US1-00899-1
US-08-232-463-14
US-09-526-002-39
US-09-596-002-39
US-07-914-281-10
US-08-393-246-10
US-08-525-058A-10
US-08-696-731-10
US-08-696-731-13
US-08-393-246-13
US-08-393-246-13
US-08-696-731-13
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 230.2; DB 4
Pred. No. 9.1e-73;
0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                equence sequence sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

Gaps

190

gene;

SS

```
밁
                                                                                                            8
                                                                                                                                                           맑
                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC The present invention relates to novel human secreted proteins (ABR54278-CC ABR54331) and their coding sequences (ACC62475-ACC62528). The proteins CC and their coding sequences are useful for treating, preventing, CC diagnosing and/or prognosing neoplastic disease, blood disorders, CC cardiovascular disorders (e.g. cardiomyopathy, hypertension, respiratory disorders (e.g. lung cancer, pneumonia, CC bronchiolitis, asthma), endocrine disorders (e.g. Addison's disease, CC (Cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegally, CC (Cushing's leukopacnia, leukoemias, arthritis, asthma, autorimune cc infections, leukopacnia, leukoemias, arthritis, asthma, autorimune cdiseases, preminatori diseases, and bone cancers, Paget's CC diseases, yout, osteoporosis, arrhythmia, angina, prostate cancer, renal CC disorders, urolithiasis, Allachimer's disease, Parkinson's disease, consecution and basal cc schizophrenia, attention deficit disorder, obsessive compulsive consecution obsessity, goiter, ulcerative colitis, hepatitis. They are also cuseful for stimulating epitherheims' cell proliferation and basal cc keratinocytes for wound healing, and to stimulate hair follicle
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Sim
Matches 409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1804 BP; 405 A; 473 C; 456 G; 465 T; 0 U; 5 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel human secreted polypeptides and polynucleotides for diagnosing and treating neural, immune system, muscular, reproductive, gastrointestinal, cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 551~552; 605pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-140609/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-JUN-2001; 2001US-0295869P.
11-JUL-2001; 2001US-0304121P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUN-2002; 2002WO-US017699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200299066-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; ABR54303.
681 CTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGT
                                                                                                                                                                                                                                                                                                                                                                                  441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SM, Bell A, Birse CE, Baker KP;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                   TAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCC 560
                                                                   CATGGAACGCGCGGAGTGGCGCCGCCGCGGCTACGCGCTGCTCTATCTGCAGTCACA 394
                                                                                                     ACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCC 620
                                                                                                                                                                                                                                                                                                                                                                             CCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCA 500
                                                                                                                                                        GCTGTCGCTGCAGTGGCTGCCCGGGACCGCCTATCTGCGC---CGCCCGGTGCCTCCGCC 334
                                                                                                                                                                                                                                            CGGCCCGGGCATCCGCCTCTTCAATCTTACCTCCACCTCAGTCGCCACTCGGATTACCC
                                                                                                                                                                                                                                                                                                                                    CCCTCGGCGCTGGGCGCTCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCA 217
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            11.1%; 52.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 162.2; DB 7;
Pred. No. 2e-41;
1; Mismatches 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Komatsoulis G,
                                                                                                                                                                                                                                                                                                                                                                                                                       359; Indels 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Choi GH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1804;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Olsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                              277
```

qq	8	В	Ş	Dβ	8	В	Ş	В	Ş	В	Ş	Дb	Ş	Дb	Ş	망	Ş	рb
935	1212	875	1152	815	1092	755	1032	695	972	635	912	575	852	515	792	455	741	395
93.5	T 1212	TCCTTTGCTGCCTAACTACCTYAACGGCTTCGAGTGTTTTCGTCTGTGACTACGAACTGGC 934	CGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGC 1211	GGCATCACCAACTTTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGA 874	TGAGATCTCTAACCAGCGACTTCTGACACCTCTCAGGGAACGGGAATGGGGAGTGCAAGA 1151	TGACTTTCTGGACAAGAATGATGAGGAGTATATGAAATACCTGGCATACAAGCAACCTGG 814	CAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGG 1091	CAATCACTCCGTCATCGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTAT 754	TAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACAT 1031	CACCTGGGCGCTGTGCCCGTGTACCGCGGTTCTCCCTCTGTGAGGGACTGGATGCCGAA 694	GAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAG 971	CTTGGCCCTGGAAAATGCCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCAT 634	CCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAGAGTTCTGGAGGCCACT 911	AGCCACGGCCACCACCGAGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCA 574	AAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTAT 851	AGACTCCTACGGGAAATGCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACAC 514	CGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAA 791	CTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGT 454

Search completed: September 12, 2004, 22:22:34 Job time: 415.627 secs

```
В
                      δ
                                                                      9
                                                                                                           Ś
                                                                                                                                                                                                                                  CC The present invention relates to novel human secreted proteins (ABR54278-ACC62528). The proteins CC ABR64331) and their coding sequences (ACC62475-ACC62528). The proteins CC and their coding sequences are useful for treating, preventing, CC diagnosing and/or prognosing neoplastic diseases, blood disorders, CC cardiovascular disorders (e.g. cardiomyopathy, hypertension, controlatics, asthma), endocrine disorders (e.g. lung cancer, pneumonia, CC bronchiolitis, asthma), endocrine disorders (e.g. Addison's disease, CC cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, CC thyroiditis), reproductive system disorders (e.g. Addison's disease, CC golycystic ovary syndrome), infectious diseases caused by bacteria, CC fungal, viral, parasitic, protozoal, and/or blood-related disorders and CC infections, leukopaenia, leukaemias, arthritis, asthma, autoimmune CC diseases, remanatoid arthritis, immune deficiency, psoriasis, CC disease, gout, osteoporosis, arrhythmia, angina, prostate cancer, renal CC disease, pout, osteoporosis, arrhythmia, angina, prostate cancer, renal CC disease, vertical attention deficit disorder, obsessive compulsive CC schizophrenia, attention deficit disorder, obsessive compulsive CC useful for stimulating epithalial cell proliferarion and basal CC keratinocytes for wound healing, and to stimulate hair follicle cc production and healing of dermal wounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    haemostatic; antidiabetic; antiallergic; antigout; antiarrhythmic; antianginal; nephrotropic; neuroleptic; neuroprotective; nootropic; antiparkinsonian; tranquiliser; anorectic; antiuleer; heparotropic; dermatological; gene therapy; neoplastic disease; blood disorder; cardiovascular disorder; respiratory disorder; cancer; endocrine disorder; reproductive system disorder; infection, arthritis; asthma; autoimmune disease; immune deficiency; psoriasis; diabetes mellitus; allergy; paget's disease; gout; osteoporosis; renal disorder; Alzheimer's disease; parkinson's disease; schizophrenia; attention deficit disorder; obsessive compulsive disorder; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel human secreted polypeptides and polynucleotides for diagnosing and treating neural, immune system, muscular, reproductive, gastrointestinal, cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Нопо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-JUN-2001;
11-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003-140609/13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MS
                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                  1812
                               TAAACCAGTGATTACCTTCTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 551; 605pp;
CGGCCCGGGCATCCGCCTCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCC
                                                                          CCCTCGGCGCTGGGCGCTCCTCCACGAGGAGTCGCCCCCCCAACAACTTCTTGCTGAGCCA
                                                                                                           CCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bell A,
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0295869P
2001US-0304121P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002WO-US017699
                                                                                                                                                                                                                                  BP;
                                                                                                                                                                                                                                    431
                                                                                                                                                                      11.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Birse CE,
                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English
                                                                                                                                                       0
                                                                                                                                                     Score 162.6; DB 7
Pred. No. 1.5e-41;
0; Mismatches 359
                                                                                                                                                                                                                                  ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Komatsoulis
                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                  G; 440
                                                                                                                                                                                                                                    Η.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ຸດ
                                                                                                                                                         359;
                                                                                                                                                                                                                                    0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Choi
                                                                                                                                                         Indels
                                                                                                                                                                                          Length 1812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Olsen
                                                                                                                                                       12;
                                                                                                                                                       Gaps
                                                                            235
                                                                                                                    500
                                       560
```

```
ACC62DAT 15
ACC62D ID ACC62
XX XX 23-JU
DT 23-JU
XX Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
inngicide; virucide; antiparasiti; protozoacide; antiparamic; indigicide; virucide; antiparasiti; protozoacide; antiparamic; antiparasiti; protozoacide; antiparamic; antiparamic; antiparamic; antiparamic; antiparamic; antiparamic; antiparamic; antiparamic; antiparamic; antiparamic, neuroleghtic; neuroprotective; nootropic; antiparamic, gene therapy; neoplastic disease; blood disorder; antiparamical; gene therapy; neoplastic disease; blood disorder; cardiovascular disorder; respiratory disorder; cancer; endocrine disorder; reproductive system disorder; infection; arthritis; asthma; autoimmune disease; immune deficiency; psoriasis; renal disorder; Alzheimer's disease; paramic, osteoporosis; renal disorder; Alzheimer's disease; paramic, osteoporosis; attention deficit disorder; obsessive compulsive disorder; wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                  antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACC62500 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACC62500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1212 T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               secreted
                                                                                                                                                                                                                                                                                                                                                                                                  cardiant; hypotensive; hypertensive; cytostatic;
hmatic; osteopathic; antithyroid; gynecological;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTTTGCTGCCTAACTACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGA 115:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGACTTTCTGGACAAGAATGATGAGGAGTATATGAAATACCTGGCATACAAGCAACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAATCACTCCGTCATCCTGATTGATGATTTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACAT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAPACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAG 971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTGGCCCTGGAAAATGCCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCCACGCCACCACCGAGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGACTCCTACGGGAAATGCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGCGAGCTCATGCGCCCACATCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGGCTGATGACTTACATCGAGGT 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGGAACGCGCGGAGTGGCGCCGCCGCGGCTACGCGCCGCTGCTATCTGCAGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GÉTETÉECTECÁGTEGCTECCCEGGÁCCECCTATCTECEC---CECCCEGTECCTCCECC 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein #26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA; 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coding sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36
                                                                                                                                                                                                                                                                                                                                                                                                         antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                        antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGCTGAA 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472
```

```
disease, gout, osteoporosis, arrhythmia, angina, prostate cancer, redisorders, urolithiasis, Alzheimer's disease, Parkinson's disease, schizophrenia, attention deficit disorder, obsessive compulsive pneumonia, obessity, goiter, ulcerative colitis, hepatitis. They are useful for stimulating epithelial cell proliferation and basal keratinocytes for wound healing, and to stimulate hair follicle
                                                                                                                                                                                                                                                                                                             The present invention relates to novel human secreted proteins (ABR54278 ABR54331) and their coding sequences (ACC62478-ACC62528). The proteins and their coding sequences (ACC62478-ACC62528). The proteins and their coding sequences are useful for treating, preventing, diagnosing and/or prognosing neoplastic diseases, blood disorders, cardiovascular disorders (e.g. cardiomyopathy, hypertension, reprintory disorders (e.g. lung cancer, pneumonia, hypotension), respiratory disorders (e.g. lung cancer, pneumonia, bronchiolitis, asthma), endocrine disorders (e.g. Addison's disease, Cushing's syndrome, hyperpituitarism, pituitary dwarfism, acromegaly, thyroiditis), reproductive system disorders (e.g. premenstrual syndrome, polycystic ovary syndrome), infectious diseases caused by bacteria, fungal, viral, parasitic, protozoal, and/or blood-related disorders and infections, leukopaenia, leukaemias, arthritis, asthma, autoimmune diseases, rheumatoid arthritis, immune deficiency, psoriasis, haemophilia, diabetes mellitus chieffic archief arc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human secreted polypeptides and polynucleotides for diagnosing and treating neural, immune system, muscular, reproductive, gastrointestinal cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                 Sequence 1804 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endocrine disorder; reproductive system disorder; infection; arthritis; asthma; autoimmune disease; immune deficiency; psoriasis; disbetes mellitus; allergy; paget's disease; gout; osteoporosis; renal disorder; Alzheimer's disease; Parkinson's disease; schizophrenia; attention deficit disorder; obsessive compulsive disorder; wound healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fungicide; virucide; antiparasitic; protozoacide; antianaemic; antiathritic; immunosuppressive; antirheumatic; antiathritic; immunosuppressive; antirheumatic; antiathrythmic; haemostatic; antidiabetic; antiallergic; antigout; antiatrythmic; antianginal; nephrotropic; neuroleptic; neuroprotective; nootropic; antianginal; nephrotropic; neuroleptic; natiunicer; heparotropic; antiparkinsonian; tranquiliser; anorectic; antiunicer; heparotropic; dermatological; gene therapy; neoplastic disease; blood disorder; cardiovascular disorder; respiratory disorder; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 539-540; 605pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-JUN-2001; 2001US-0295869P.
11-JUL-2001; 2001US-0304121P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200299066-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antiasthmatic; osteopathic; antithyroid; cytostatic; antiinflammato antiasthmatic; osteopathic; antithyroid; gynecological; antibacterial; fungicide; virucide; antiparasitic; protozoacide; antianaemic; antiattritic; immunosuppressive: anti-recurrent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HUMA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACC62479;
y Match
Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2003-140609/13.
DB; ABR54282.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,
MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002WO-US017699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENOME
                                                                                                                                    healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                 405 A; 474 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Birse CE,
     11.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCI INC
                                                                                                                                       of dermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coding
     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Komatsoulis G,
                                                                              457 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence SEQ
     162.6; DB 7
No. 1.5e-41;
                                                                                 465
                                                                                 T; 0
                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Choi GH,
                                                                                 Д
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15
                         Length 1804;
                                                                                 3 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Olsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      healing;
                                                                                                                                                                                                                   also
```

```
XAXEXEXEXX
                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
Human; cardiant; hypotensive; hypertensive; cytostatic; antiinf antiasthmatic; osteopathic; antithyroid; gymecological; antipace fungicide; virucide; antipacarastic; protozoacide; antipacento; antiarthritic; immunosuppressive; antirheumatic; antipsoriatic;
                                                                                                                                                                              ACC62499 standard; cDNA; 1812
                                                                                                                  23-JUN-2003
                                                                                                                                                                                                                                                                                              1212
                                                                                                                                                                                                                                                                                                                                                             1152
                                                                                                                                                                                                                                                                                                                                                                                                                           1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1032
                                                                                                                                                                                                                                                               935
                                                                                                                                                                                                                                                                                                                                                                                                                                                           755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          410;
                                                                                  secreted
                                                                                                                                                                                                                                                             Ť 935
                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                            TCCTTTGCTGCCTAACTACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGC
                                                                                                                                                                                                                                                                                                                                                    CGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                            GGGCATCACCAACCAATTTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                         TGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACTTTCTGGACAAGAATGATGAGGAGTATATGAAATACCTGGCATACAAGCAACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATCACTCCGTCATCCTGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCCAGGGAACTGGCAAGTTACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCACCTGGGCGCTGTGCCCGTGTACCGCGGTTCTCCCCTCTGTGAGGGACTGGATGCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTGGCCCTGGAAAATGCCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAATCÇAGCCTCTATGGATGCCGATGGCTTTTATAGGATÇATTGCACAGTATAAGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGACTCCTACGGGAAATGCCTGCAGAATCGGGAGCTGCCTACGCGCGGCTACAGGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATEGAACGCGCGGAGTGGCGCCGCCGCCGCTACGCGCCGCTGCTCTATCTGCAGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGTCGCTGCAGTGGCTGCCCGGGACCGCCTATCTGCGC---CGCCCGGTGCCTCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCGGGCATCCGCCTCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAPACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCTCGGCGCTCGCTCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ccarcargacregecrerrrrcargaagaerececegaaaaacaarraraageretrrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCACGGCCACCAGGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGT
                                                                                                                                                                                                                                                                                              1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                  (first
                                                                                  protein
                                                                                                                 entry)
                                                                                  #25
                                                                                coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                  sequence
                                                                                  SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359;
                                                                                  IJ
                                                                                  ω
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                  antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCAGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                           1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       971
                                                                                                                                                                                                                                                                                                                                                                                            874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217
```

```
RESULT 12
ABLO7617
ID ABLO7
AC ABLO7
AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention
                                                                                                                                                                                                                                  New isolated nucleic a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Drosophila melanogaster expressed polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABL07657;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABL07657
                                                                                                                                                       Claim 1; SEQ ID NO 17453; 21pp +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Drosophila;
                                                                                                                                                                                                            interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                      PEKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1083
                                                                                                                                                                                                                                                                                                                                       2001-656860/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      963
                                                                                                                                                                                                                                                                                                                                                                                       ďĊ,
                                                                                                                                                                                                                                                                                                                                                                                                                                      PE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       acarcearecartreaererarecrerecaceaecrereeecr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGTGTACCGCGGTTCTCCCCTCTGAGGGACTGGATGCCGAACAATCACTCCGTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              стстататтассеватессскассатсасасастсскастсевсттсскастаскамастсстатте
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCTTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                      CORP NY
                                                                                                                                                                                                                                                                                                                                                                                    Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           developmental biology;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0191637P
2000US-00614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US009231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                       acid
a and
                                                                                                                                                                                                                                                                                                                                                                                       F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1431
                                                                                                                                                                                                                                                                                                                                                                                       PWD,
                                                                                                                                                                                                                                    detection reagent for detecting 1000 or more for elucidating cell signaling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВР
                                                                                                                                                                                                                                                                                                                                                                                       Myers
                                                                                                                                                            Sequence Listing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                         图
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ
                                                                                                                                                            English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NO 17453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      928
                                                                                       18
```

```
유정
                                          밁
                                                                 Ş
                                                                                              문
                                                                                                                Š
                                                                                                                                            ,
a
                                                                                                                                                                  Ş
                                                                                                                                                                                          밁
                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                    성 유
                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                               뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABL72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1431 BP;
 1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 427;
                                                 986
                                                                                                 926
                                                                                                                         968
                                                                                                                                                998
                                                                                                                                                                                                    806
                                                                                                                                                                                                                            848
                                                                                                                                                                                                                                                     746
                                                                                                                                                                                                                                                                                                     989
                                                                                                                                                                                                                                                                                                                                                       626
                                                                                                                                                                                                                                                                                                                                                                               671
                                                                                                                                                                                                                                                                                                                                                                                                        566
                                                                                                                                                                                                                                                                                                                                                                                                                                                        506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  494
                                                                                                                                                                                                                                                                            791
                                                                                                                                                                                                                                                                                                                            731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                          ×
                                                                                                                     CAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTT
                                                                                                                                                                                                                                                                         AAAATCCAGCCTCTA---TGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGT
                                                                                                                                                                                                                                                                                                                                                       TCCAAAGCGACTGCGACACGATGTCTGGAAGGGAGGACTACGTAAAGGAACTGATGAAAC
                                                                                                                                                                                                                                                                                                                                                                               TACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                               TAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAG---ACTTGCTCCGCTGGTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTTGCCGCTGACTACGATGTACTTGCCCAGTGGCGAGGCGCTTACTTCGAAGGATTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACC 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCCAATAAAGAGTTCCTTCGCCACTTCCATTTCACATCCACGTTTAGCCGCTACAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGCCCGGGGCGTCCTGTTTTACGGCTCAAACATAAAGACGGGAGACTTTCCCCTGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCAGTGCGGAATTCATACTTGCCGCATCACCAACAAGCGGA------GCCGCCGTCCGT 325
                                                 ATCTCAATAAGTTGGCGGATAACAAAAAGCTGTACAATTCGTACCGCCAACACAAACTAA
                                                                                                                                                                                                    TTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                    AGGATTACTTGAATAATTTATATTCACCGGAGTTGCTGCGTTTCCTGTCCGAATACAAGT
                                                                                                                                                                                                                                                                                                     ATCTTCCGATCGATTCCTACGGCAGCTGCCTACGGAATAGAGATCTGCCAGAGAGGCAAA
                                                                                                                                                                                                                                                                                                                            GGAACGAGCACCAAATCTGGGCCCTACTGCATGAAGAATCACCAAGGAACACCCCTTTTG
                                                                                                  CGAATAATAAATCTGCAATTTTTGTGAACGACTTTCAAAATCCTCAGGCATTGGTAGAGT
                                                                                                                                                  CTTTGATAATGGGAGTTATTCCAATTTACTTTGGCTCACCACCATAAAAGACTGGGAAC
                                                                                                                                                                         ACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGA
                         1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               390 A; 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 179.8; DB 4;
Pred. No. 3.1e-47;
0; Mismatches 342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; 342 G; 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                            1087
                                                                                                                             1027
                                                                                                                                                                                                      865
                                                                                                                                                                                                                               907
                                                                                                                                                                                                                                                        805
                                                                                                                                                                                                                                                                               847
                                                                                                                                                                                                                                                                                                        745
                                                                                                                                                                                                                                                                                                                                 790
                                                                                                                                                                                                                                                                                                                                                        685
                                                                                                                                                                                                                                                                                                                                                                                                           625
                                                                                                                                                                                                                                                                                                                                                                                                                                   670
                                                                                                                                                                                                                                                                                                                                                                                                                                                            565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       433
                                                     1045
                                                                                                     985
                                                                                                                                                     925
                                                                                                                                                                              967
```

RESULT 13 ACC62479 ID ACC62 XX

ACC62479

standard; cDNA;

1804

ВP

```
RESULT 11
ABA05333
ID ABA0533
ID ABA05333

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antiatherosclerotic; hypotensive; antiarrhythmic; vasotropic; antiatherosclerotic; hypotensive; antiarrhythmic; vasotropic; antiatheroj; antiatheroj; antiatheroj; antiatheroj; antiatheroj; antiatheroj; antiathmato; antiparrhoropic; ophthalmological; antiatheroj; uninerary; haemostatic; virucide; antibacterial; mootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic; anorectic; metabolic; immunomodulator; anticonvulsant; analgesic; anorectic; metabolic; immunomodulator; cardiovascular differentiation; cancer; apoptosis; leukaemia; arthritis; cardiovascular differentiation; cancer; apoptosis; leukaemia; arthritis; cardiovascular differentiation; cancer; apoptosis; leukaemia; arthritis; cardiovascular differentiation; cancer; apoptosis; pain; gene therapy; ss.
                                                                 Novel isolated 32132 nucleic acid encoding 32132 polypeptide, a novel member of fucosyltransferase family, useful for treating atherosclerosis,
Claim 1; Page 105-107; 125pp; English
                                                                                                                                                     WPI; 2002-041492/05
P-PSDB; AAM47905.
                                                                                                                                                                                                                           Meyers RA,
                                                                                                                                                                                                                                                                                                                         28-APR-2000; 2000US-0200604P
                                                                                                                                                                                                                                                                                                                                                                         27-APR-2001; 2001WO-US013805
                                                                                                                                                                                                                                                                                                                                                                                                                             08-NOV-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                 multiple sclerosis, acute glomerulonephritis, Raynaud's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200183721-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human fucosyltransferase family member 32132 encoding cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABA05333;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABA05333 standard; cDNA;
                                                                                                                                                                                                                                                                             (MILL-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           fucosyltransferase family member 32132; cytostatic; antitumour;
                                                                                                                                                                                                                                                                          MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCTGTAACGACTACATGACAGAAAAACTGTGGCGTCCCATGCACCTGGGCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCAACGGCTTCGAGTGTTTCGTCTGTGACTACGAACTGGCT 1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCT 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTTCTGGATAGTCTGAAGCATCGGGAGTGGGGAGTGAATGATCCTTTGCTGCCTAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACTICTGACAGCICTCAGGGAACGGAAATGGGGGAGTGCAAGACGTCAACCAGGACAATT 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGC 1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTC 988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGATTGATGATTTTGAGTCTCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGA 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTG 1048
                                                                                                                                                                                                                           Williamson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product= "fucosyltransferase family member 32132"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    907
                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      546
                          758
                                                                                                                                                                                                                                                                                                                       578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      458
```

```
Commember of the fucosyltransferase family comprising: (a) nucleotide compressing the fucosyltransferase family comprising: (a) nucleotide comprising fragment of Si or S3; (c) encoding a polyophide (II) comprising a fully defined sequence S2 (AAM4795) of 492 amino acids or its fragment; or (d) encoding naturally occurring allelic variant of S2. (c) has cytostatic, antitumour, antiatherosclerotic, hypotensive, cantitumour, antiatherosclerotic, hypotensive, comprising fall, antidayrid, antidabetic, antiarthritic, comprising fall, antidayrid, antidabetic, antiarthritic, compressive, anticallergic, antiatherosclerotic, hypotensive, compressive, anticallergic, antiatherosclerotic, hypotensive, compressive, anticallergic, antiatherosclerotic, nephrotrophic, dermatological, antidayridic, vulnerary, haemostatic, virucide, compressive, analgesic, antiatherosclerotic, mephrotrophic, compressive, and (II) are useful for treating proliferative and/or contitorovulsant, analgesic, anorectic, metabolic and immunomodulator anticorvulsant, analgesic, anorectic, metabolic and immunomodulator carcinogenesis, the liver, including rodular hyperplasia and accolorectal carcinogenesis, carcinogenesis, carcinogenesis, carcinogenesis, car
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 489; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          multiple sclerosis, metabolic or pain disorders. (I) can be used in gene
GTTTACGAAACAAAGACCTCCCT-----CAGCAGCTGAAAAAATCCAGCCTCTATGG
                                                                                                                             ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAAT
                                                                                                                                                                                                              ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT
                                                                                                                                                                                                                                                                                                   GGCGCCGCCGCGGCTACGCGCCGCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG
                                                                                                                                                                                                                                                                                                                                                                               AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCCCGGGACCGCCTATCT---GCGCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOTTCAATOTTACOTOCACOTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTCCACGAGGAGTCGCCCCTCAACAACTTCTTGCTGAGCCACGGCCCGGGCATCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACAGACTTCCGCGCGCGCGCCGCCGCTGCCGCGCCTGGCGCACCAGAGCTGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP; 540 A; 690 C; 684 G; 641 T; 0 U; 2 Other,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 180.8; DB 6; Pred. No. 2.1e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 2557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                    697
                                                                                                                             962
                                                                                                                                                                                                                                                                                                   902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          545
```

```
ABAOSDET 10
ABAOSS
ACC ABAOSS
ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antiatherosclerotic; hypotensive; antiarrhythmic; vasotropic; antidiabetic; antiarrhythic; immunosuppressive; antithyroid; antiulcer; antinflammatory; ophthalmological; antiallergic; antiasthmatic; nephrotrophic; dermatological; antidiarrheic; vulnerary; haemostatic; virucide; antibacterial; nootrophe; neuroprotective; antiparkinsonian; anticonvulsant; analgesic; anorectic; metabolic; immunomodulator; prolifferation; differentiation; cancer; apoptosis; leukaemia; arthritis; cardiovascular disease; diabetes mellitus; ulcerative colitis; Crohn's disease; glomerulonephritis; hepatocellular necrosis; crohn's disease; meningitis; multiple sclerosis; pain; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
The invention relates to an isolated 32132 nucleic acid (I), encoding member of the fucosyltransferase family comprising: (a) nucleotide sequence having 80% identity to sequence S1 (ABA05333) or S3 (ABA0533 (b) comprising fragment of S1 or S3; (c) encoding a polypeptide (II) comprising a fully defined sequence S2 (AAM47905) of 492 amino acids its fragment; or (d) encoding naturally occurring allelic variant of
                                                                                                                                             Claim 1; Page 105-106; 125pp; English.
                                                                                                                                                                                      Novel isolated 32132 nucleic acid encoding 32132 polypeptide, a novel member of fucosyltransferase family, useful for treating atherosclerosis, multiple sclerosis, acute glomerulonephritis, Raynaud's disease, pain.
                                                                                                                                                                                                                                                                                                                                                                                                                28-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-APR-2001; 2001WO-US013805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200183721-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; fucosyltransferase family member 32132; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human fucosyltransferase family member 32132 coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABA05334
                                                                                                                                                                                                                                                                                          2002-041492/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      245
                                                                                                                                                                                                                                                                                                                                 RA,
                                                                                                                                                                                                                                                                       AAM47905
                                                                                                                                                                                                                                                                                                                                                                           MILLENNIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTCCCCGCTGACGGGGGAGACTGGGAAGGTTAGGCCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; cDNA; 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GETCCCCGCTGACGGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                    Williamson
                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0200604P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
/product= "fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                             PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                    Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     member
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antitumour;
                                                                   (ABA05334);
                                                                                                        encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     398
          S2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            364
                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                            Ś
                                                                                                                   В
                                                                                                                                                              Ş
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1479 BP;
                                                                                                                                                                                                                   899
                                                                                                                                                                                                                                                       869
                                                                                                                                                                                                                                                                                                                                                                                 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        398
                                                                                           809
                                                                                                                                  728
                                                  788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
             CAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCC
                                                                            ATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATG
                                                                                                                                  GCCTGCAGAATCGGGAGCTGCCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCG
                                                                                                                                                                     GETTTACGAAAACAAAGACCTCCCT-----CAGCAGCTGAAAAATCCAGCCTCTATGG
                                                    AGGATCCAGAGCTCTTGGCTTTCTTGTCCCGCTATAAGTTCCACTTGGCCCTGGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              280 A; 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.4%; 51.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; 459
```

```
CC (I) has cytostatic, antitumour, antiatherosclerotic, hypotensive,
CC antiarrhythmic, vasotropic, antidiabetic, antiarthritic,
CC immunosuppressive, antithyroid, antiulcer, antiinflammatory,
CC ophthalmological, antidialregic, antiasthmatic, nephrotrophic,
CC dermatological, antidiarrheic, vulnerary, haemostatic, virucide,
CC antibacterial, nootropic, neuroprotective, antiparkinsonian,
CC antiorovulsant, analgesic, anorectic, metabolic and immunomodulator
CC activity. (I) and (II) are useful for treating proliferative and/or
CC differentiative disorders of the colon, including adenoma and colorectal
CC carcinogenesis, the liver, including nodular hyperplasia and adenomas,
CC breast, including epithelial hyperplasia and sclerosing adenosis, lung,
CC including bronchogenic carcinoma and neuroendocrine tumour. The
CC disorders such as acute promyeloid leukaemia, acute myelogenous
CC disorders such as acute promyeloid leukaemia, cute myelogenous
CC diseases, disorders of blood vessels, immunological disorders such as
CC disbetes mellitus, arthritis, ulcerative colitis, Crohn's disease,
CC asthma, kidney disorders e.g., polycystic kidney disease, acute
CC glomerulonephritis, colon disorders, disorders of liver such as disorders
CC associated with accumulation of fibrous tissue, hepatocellular necrosis
CC associated with accumulation of fibrous tissue, hepatocellular necrosis
CC multiple sclerosis, metabolic or pain disorders. (I) can be used in gene
CC therary
<u>ດ</u>
287
     T; 0
          ₽,
     0 Other
```

GGTGGTCCCCGCTGACGGGGGGGACACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTT 337 Score 180.8; DB 6; Pred. No. 1.5e-47; Mismatches 442; Indels Length 1479; 13; Gaps

GCTATTCCCCCACTTCCCGGGGGGGCGCGAGCGCGA-TCGAGTGTGCGCGCGCGCGCGTGCG 310 ACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAAT AGCTTAGAAAAAGACTTGCTCCGCTGGTGTATACAGTCAGACTGTGAGCCCACCATCAG TCTTCAATCTTACCTCCACCTTCAGTCGCCACTCGGATTACCCGCTGTCGCTGCAGTGGC теттсьястьсяствескаеттелесаттессаеттессаеттессаеталет TTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCT 517 GTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTG 457 TCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATG 397 GGCGCCGCCGGCTACGCGCCGCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGG TGCCCGGGACCGCCTATCT---GCGCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGT recretaciación de decentra de la recretación de TGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACA 637 <u>ACCGGGACCGCTACGTGCGCGAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAAT</u> 667 607 550 577 727 697

808

787

```
RESULT 9
ABS67785
         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cc recombinant production of a polypeptide of the invention; an antibody cagainst a polypeptide of the invention; an amethod of detecting polynucleotides or polypeptides of the invention; and methods of coloring and methods of polypeptide of the invention. The climatery discloses methods of peventing, treating or ameliorating a medical condition; kits comprising polynucleotide probes convention, methods for the intentification of compounds that modulate the capturession or activity of the polynucleotide and/or polypeptide; and 767 cc contig sequences corresponding to the cDNA sequences of the invention (ADC31861-ADC32627) and the polypeptides encoded by the contigs (ADC32628 capture) and the polypeptides of the invention are constituted in diagnostics, drug screening, forensics, gene mapping, in the classification of mutations responsible for genetic disorders or other traits, for assessing biodiversity, and in producing many other traits, for assessing biodiversity, and in producing many cher traits, for assessing biodiversity, and amino acid sequences. They are climated the products dependent on DNA and amino acid sequences. They are climater for treating diseases such as parkinson's disease, Alzheimer's cdisease and other neurodegenerative diseases, anaemia, platelet considers, wounds, burns, ulcers, osteoporosis, autoimmune diseases or concer. The nucleic acids may also be used as hybridisation probes or concer. The nucleic acids may also be used as hybridisation probes or concer. The nucleic acids may also be used as hybridisation probes or concer. The nucleic acids may also be used as hybridisation probes or concer. The nucleic acids may also be used as hybridisation probes or concer. The nucleic acids may also be used as hybridisation probes or concer. The nucleic acids may also be used as hybridisation probes or concern the nucleic acids may also be used as hybridisation. The polypeptides care also useful in 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 300
Human; receptor and membrane-associated protein; REMAP; atherosclerosis; cardiovascular disorder; hypertension; congestive heart failure; oedema; aneuryem; angina pectoris; ischaemic heart disease; lung disease; rheumatic heart disease; chronic obstructive pulmonary disease; anaemia; rheumatic heart disease; chronic obstructive pulmonary disease; anaemia; emphysema; bronchitis; gastrointestinal disorder; peptic ulcer; asthma; crohn's disease; lipid metabolism disorder; Fabry's disease; dementia; pancreatitis; diabetes mellitus; hyperlipidaemia; autoimmune disorder; inflammatory disorder; neurological disorder; Creutzfeldt-Jakob disease;
                                                                                                                                                                                                                                                               29-NOV-2002
                                                                                                                                                                                                                                                                                                                                                     ABS67785 standard; DNA; 1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1061 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCACCATCAACCGGACCTACCTCCATCACATGACCAAAGCATTCCTCTTCTATGGTA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTCCCCGCTGACGGGGAGACTGGGGAGGTTAGGCCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20.5%; but
100.0%; Pr
                                                                                                                                                                                                                membrane associated protein REMAP-7
                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 255 C; 299 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 300; DB; Pred. No. 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261 T; 0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.5e-86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     φ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   544
```

밁 S

185

<u>ÀGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTTCCAGTTTGCAAG</u> AGGTCATGGTTGAGGTGGGGAAGTTTGAAAGGAGTTTAAAAGTTTCCAGTTTGCAAG

244 160 0

Similarity

Conservative

0,

Mismatches

8.4e-86;

Indels

0

Gaps

```
The present invention relates to a new receptor and membrane-associated CC protein (REMAP). The polypeptide, polynucleotide and agonist are useful CC for treating a condition associated with decreased expression of CC functional REMAP. The antagonist is useful for treating a disease cassociated with overexpression of functional REMAP. The antagonist is useful for treating a disease cassociated with overexpression of functional REMAP. The anti-REMAP cantibody is useful for diagnosing a condition or disease associated with the expression of REMAP. These polypeptides, polynucleotides, agonists can an antagonists are particularly useful for diagnosing, treating or preventing cardiovascular (e.g. atherosclerosis, hypertension, aneurysms, compestive heart failure, angina pectoris, or ischaemic or rheumatic compestive heart failure, angina pectoris, or ischaemic or rheumatic composed of the promobilist of the condition of the conformal disease, peptic ulcer or complysema or bronchitis) gastrointestinal (e.g. nausea, peptic ulcer or composed or hyperlipidemia), autoimmune/inflammatory (e.g. anaemia, cashina, gout, panoreatitis or Crohn's disease, neurological (e.g. asthma, gout, panoreatitis or Crohn's disease, neurological (e.g. anaemia, stroke, Alzheimer's disease, creutzfeldt-Jakob disease, camietia), metabolic (e.g. Addison's disease), developmental (e.g. cushing's syndrome), endocrine or cell proliferative disorders (e.g. cancers including adenocarcinoma, leukamenia, lymphoma, myeloma or compositional composition or cell proliferative disorders (e.g. concers including adenocarcinoma, leukamenia, lymphoma, myeloma or concers including adenocarcinoma, leukamenia encodes a human REMAP protein concers including adenocarcinoma, leukamenia encodes a human REMAP protein concers including adenocarcinoma, leukamenia encodes a human REMAP protein concers including seent nucleic acid sequence encodes a human remarkament concerning and sequence encodes a human remarkament concerning and sequence encodes a human remarkament co
Query Match
Best Local S
Matches 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-FEB-2001;
16-FEB-2001;
09-APR-2001;
02-MAY-2001;
14-UAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell proliferative disorder; protein replacement.
developmental disorder; metabolic disorder; Alzheimer's disease; belockinson's disease; multiple sclerosis; Cushing's syndrome; anxiety; schizophrenia; Addison's disease; endocrine disorder; gene therapy; grachizophrenia; Addison's disease; endocrine disorder; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New human receptor and membrane-associated proteins and polynucleotides, useful for diagnosing, treating or preventing cardiovascular disorders (e.g. aneurysms), neurological disorders (e.g. Parkinson's disease) or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Azimzai Y, Yue H, Ding L, Nguyen Thangavelu K, Elliott VS, Ramkumar Swarnakar A, Warren BA, Walia NM, Au-Young J, Baughn MR, Duggan BM, Raumann BB, Lu Y, Sapperstein SK, Emerling BM, Hafalia AJA, Burrill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200263006-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-627559/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 232-233; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; 2001US-0267201P.
; 2001US-0269580P.
; 2001US-0282679P.
; 2001US-0288295P.
; 2002US-0348687P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002WO-US003868
                                                                                         B₽;
                                                                                         413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ding L.
                     20.4%;
                                                                                         Ä
                                                                                         344 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L, Nguyen DB, Gandhi AR, Burford N, Ramkumar J, Yao MG, Lal PG, Tang Walia NK, Policky JL, Xu Y, Honche Duggan BM, Lu DAM, Gietzen KJ, Hill rstein SK, Tran UK, Richardson TW; Burrill JD, Marcus GA, Zingler KA
                       Score 298;
Pred. No.
                                                                                         348
                                                                                         Ω.
                                                                                         445 T; 0 U; 0 Other;
                                            DB 6;
                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PG, langle Y, Honchell of utilmar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Burford N;
1 PG, Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zingler KA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  adenocarcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hillmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŢΥ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           stroke;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                θ
```

02-OCT-2000; 02-OCT-2000; 13-OCT-2000; 20-OCT-2000;

```
S
                                                      멍
                                                                                     Ş
                                                                                                                                                                                                   CC related complex; stimulates chondrocyte growth, thus they can be used to cenhance bone and periodontal regeneration and aid in tissue transports or combine grafts; prevents skin aging due to sunburn by stimulating combine transports or combine they can be used to cerativate hair-forming cells and promotes melanocyte growth; stimulates combination with other cytokines; maintains organs before transplantation or for supporting cell culture of primary tissues; combination with other cytokines; maintains organs before cransplantation or for supporting cell culture of primary tissues; complete tissue of mesodermal origin to differentiate in early embryos; complete tissue of mesodermal origin to differentiate in early embryonic stem cells, besides, haematopoietic lineage; modulates mammalian characteristics, such as, body height, weight, hair colour, eye colour, compentate surgery); modulates mammalian metabolism; changes mammal's metal state or physical state by influencing biorhythms, caricadic rhythms, captesion, tendency for violence, tolerance for pain, reproductive capabilities, hormonal or endocrine levels, appetite, libido, memory, or stress; increases or decreases storage capabilities, fat content, lipid, components. This sequence encodes a novel human musculoskeletal system components. This sequence data for this patent did not form part of the printed specification, but was obbained in electronic format directly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-OCT-2000;
20-OCT-2000;
01-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and other cardiovascular conditions; treats wounds due to injuries, burns, post-operative tissue repair, and ulcers; stimulates angiogenesis and limb regeneration; stimulates neuronal growth; can treat and prevent neuronal damage occurring in certain disorders or neurodegenerative conditions, such as, Alzheimer's disease, Parkinson's disease, and AlDS-
                                                                                                                                                                                                                                                     antigen. Note: The sequence printed specification, but w from the US patent office at
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tissues associated with conditions such as thrombosis, arteriosclerosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ROSE/)
(RUBE/)
(BARA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence encod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention describes an isolated nucleic acid molecule comprising a uence encoding musculoskeletal system associated polypeptides useful detecting disorders, e.g., cancer or cancer metastases, in animals or ans. The nucleic acid: stimulates re-vascularisation of ischaemic
                                                                                                                                                                                                                                     seqdata.uspto.gov/sequence.html?DocID=20020147140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003-128199/12
                   592
                                                                                          532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RUBEN S
BARASH
                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABU12557
                                                                                                                                                                                                   378
GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGA
                                                                                     GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 187; 321pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
                                                      GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polypeptides,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; 2000US-0237039P.
2000US-0237040P.
2000US-0239935P.
2000US-0240960P.
2000US-0241785P.
2000US-0241805P.
2000US-0248617P.
2000US-0248617P.
2000US-0251868P.
2000US-0251868P.
                                                                                                                             Conservative
                                                                                                                                                                                                   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         വ വ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 M.
                                                                                                                                                                                                 107 A; 90
                                                                                                                                             22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      useful
                                                                                                                                                                                                   C; 84 G;
                                                                                                                             Score 323.8; DB 7
Pred. No. 1.4e-94;
0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      encoding musculoskeletal system for detecting disorders, e.g. cancer.
                                                                                                                                                                                                     96
                                                                                                                                                                                                   T; 0 U; 1 Other;
                                                                                                                                                                DB 7;
                                                                                                                               œ
~:
                                                                                                                                                              Length 378;
                                                                                                                               Indels
                                                                                                                             5
                                                        60
                                                                                          591
                     651
```

```
RESULT 8
ADC30780
ID ADC30780
AC ADC3
XX ADC3
XX ADC3
XX ADC3
XX Huma
DE Huma
XX Huma
XX biod
XX meur
XX mole
XX Mode

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet disorder; wound; burns; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective, antianaemic; antiooagulant; thrombolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic;
                                                                                                                                                                                                                                  New polynucleotide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or
                                                                                                                                                                                                                                                                                                                                               P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                       Haley-Vicente D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang TY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human novel cDNA sequence, SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-SEP-2001; 2001US-0324631P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADC30780;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADC30780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-SEP-2002; 2002WO-US030474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003029271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-2003
                                                                                                                                                                                                                                                                                                                                            2003-371981/35.
DB; ADC31751.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     therapy; chromosome 8; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang J,
Ghosh M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard; cDNA; 1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        osteopathic; immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                       J, Ren F,
Wang D,
Drmanac F
                                                                                                                                                                                                                                                                                                                                                                                                                                ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ma Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO:862
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Asundi V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -GAGATGCATTTGTGATGA-NACATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wang J, Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Wehrman Weng G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          831
```

The invention relates to 971 novel human cDNA sequences (ADC29919-ADC30889) and the polypeptides they encode (ADC30890-ADC31860). The invention also relates to nucleic acid sequences over 99% identical the novel human cDNAs. The invention additionally encompasses expresevectors and host cells comprising a nucleic acid of the invention; t

expression

the

Claim 1; SEQ ID NO 862; 1185pp; English

```
Š
                                                                             밁
                                                                                                       δ
                                                                                                                                                         맑
                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC The invention relates to novel genes (AAL34669-AAL37666) and proteins CC (ABB03087-ABB04109) associated with the musculoskeletal system useful for preventing, treating or ameliorating medical conditions e.g. by protein CC greventing, treating or ameliorating medical conditions e.g. by protein CC disclosed in the specification. The nucleic acids, proteins, antibodies CC and (ant)agonists are useful in the diagnosis, treatment and prevention CC of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, CC lung, or urogenital; (b) immune disorders e.g. Addison's disease, CC allergies, autoimmune haemolytic anaemia, autoimmune thyroidilis, CC arthritis and ulcerative colitis, (c) cardiovascular disorders such as CC myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. CC crebral anoxia and epilepsy, and (f) infectious diseases such as viral, CC cardiovascular dio not form part of the printed specification, but was CC obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isolated polypeptide for treating, preventing and/ or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g. diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-DEC-2000; 2000US-0251989P.
08-DEC-2000; 2000US-0251990P.
11-DEC-2000; 2000US-0254097P.
05-UAN-2001; 2001US-025967BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 378 BP; 107 A; 90 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 187; 781pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HUMA-) HUMAN GENOME SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Sim
les 363;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-451937/48.
356
                                                                                301
                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       532
                                                                                                                                                                                                                                                                             712
                                                                                                                                                                                                                                                                                                                                                                                                                                         592
                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                                                                                                                                                                     GACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATC 831
                                                                                                                                                                                                                                                                                                                                                                                                                              GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCTTAGAAAAAGA 651
                                                                                A-TGCACAGTATÁAGTTTATCCTAGCTTT---GAGATGCATTTGTGATGÁ-NACÁTCACT
                                                                                                                 ATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACT 891
                                                                                                                                                                                                                                       GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA
                                                                                                                                                                                                                                                                GTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAA 771
                                                                                                                                                                                                                                                                                                                     CTTGCTCCGCTGGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT 180
                                                                                                                                                                                                                                                                                                                                                           CTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTAT 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAA
                                        GAGAAGTTCTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                               GTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22.2%; Score 323.8; DB 4; Length 96.5%; Pred. No. 1.4e-94; tive 0; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ruben SM,
                                        907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           84 G; 96 T; 0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ت.
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     591
                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                         300
```

```
ALEX-7933

AC ABS-5933;

AC ABS-5933;

AC ABS-5933;

AC ABS-59343;

AC ABS-59344;

AC ABS-59344;
```

Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	X
W Validarity (Sene to the cardinary (Sene to	
CONVALUBANT (hepatotropic;
er; immune disorder; cardiovascular disorder; ion; human; secreted protein;	antiinflammatory; antiulcer;
	_
~ ************************************	PR
25. SEP 2000 26. SEP 2000 27. SEP 2000 29. SEP 2000 29. SEP 2000 29. SEP 2000 20. OCT 2000 20	66
2000US-0234399P 2000US-023499P 2000US-023499P 2000US-0235984P 2000US-0235834P 2000US-0235835P 2000US-0235837P 2000US-0235369P 2000US-0235369P 2000US-0235369P 2000US-0235369P 2000US-0235369P 2000US-0235369P 2000US-0237039P 2000US-0237039P 2000US-0237039P 2000US-0237039P 2000US-02341786P 2000US-02341786P 2000US-02341786P 2000US-02341786P 2000US-02341787P 2000US-02341787P 2000US-02341787P 2000US-0234617P 2000US-0234617P 2000US-023667P 2000US-023667P 2000US-023667P 2000US-02369213P 2000US-02369213P 2000US-02369213P 2000US-02369213P 2000US-02369213P 2000US-02369213P 2000US-02369213P 2000US-02369213P 2000US-023921	ous-02

```
RESULT 5
ADC32194/c
ID ADC32194
      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet discorder; wound; burns; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic;
The invention relates to 971 novel human cDNA sequences (ADC29919-ADC31860). The ADC30889) and the polypeptides they encode (ADC30890-ADC31860). The invention also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression vectors and host cells comprising a nucleic acid of the invention; the recombinant production of a polypeptide of the invention; an antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                          New polynuclectide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or
                                                                                                                                                                                                                                                                  Haley-Vicente D,
                                                                                                                                                                                                                                                                                   Zhou
                                                                                                                                                                                                                                                                                                 Tang
                                                                                                                                                                                                                                                                                                                                                                                           24-SEP-2002; 2002WO-US030474.
                                                                                                                                                                                                                                                                                                                                                                                                                        10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003029271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADC32194;
                                                                                                              Example
                                                                                                                                                                                                                        P-PSDB;
                                                                                                                                                                                                                                                                                                                               (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                            24-SEP-2001; 2001US-0324631P
                                                                                                                                                                                                                                                                      J TY, ZHL...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1002
                                                                                                                                                                                                                                     2003-371981/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                therapy; chromosome 8; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        762
                                                                                                                                                                                                                      ADC32961
                                                                                                                                                         conditions such as
s, wounds, burns, ul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGAAACAAAGACCTCCCTCAGCAGCTGAAAAAATCCAGCCTCTATGGATGCCGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTCACCCCAGGGAACTGGCAAGTTATATCAGACGACTGGATTCTGATGACAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATT 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACGG
                                                                                                              SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA contig sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                           ID NO 2276; 1185pp; English.
                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                 Drmanac
                                                                                                                                                                                                                                                                              Ren F,
Wang D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  447
                                                                                                                                                                                                                                                                  RT;
                                                                                                                                                                                                                                                                                 Xue AJ,
Ma Y, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO:2276.
                                                                                                                                                                                                                                                                                 J, Zhao QA,
Asundi V,
                                                                                                                                                                                                                                                                               Wang J,
Wang Z,
                                                                                                                                                                                                                                                                                 Weng
                                                                                                                                                                                                                                                                                 Wehrman
Weng G;
                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               419
```

Cytostatic;

immunosuppressive;

nootropic;

neuroprotective; antiviral;

SEQ ID

ö

08-JAN-2002 AAL34845;

(first entry

Human musculoskeletal system related polynucleotide

```
RESULT 6
AAL34845
ID AAL3
XX
AC AAL3
AC AAL3
XX
DT 08-J
XX
DE Huma
XX
KW Cyto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cc against a polypeptide of the invention; a method of detecting polynucleotides or polypeptides of the invention; and methods of cidentifying a compound which binds to a polypeptide of the invention. The cidentifying a compound which binds to a polypeptide of the invention. The cinvention further discloses methods of peventing, treating or a method in the invention; and polynucleotide probes cand/or monoclonal antibodies for carrying out the methods of the compounds that modulate the conting sequences corresponding to the cDNA sequences of the invention conting sequences corresponding to the cDNA sequences of the invention conting sequences, drug screening, forensies, gene mapping, in the custion in diagnostics, drug screening, forensies, gene mapping, in the custion in diagnostics, drug screening, forensies, gene mapping, in the cidentification of mutations responsible for genetic disorders or other cases and products dependent on DNA and amino acid sequences. They are consisted for treating diseases such as Parkinson's disease, Alzheimer's consisted for treating diseases such as Parkinson's disease, Alzheimer's conscers. The nucleic acids may also be used as hybridisation probes or concers. The nucleic acids may also be used as hybridisation probes or concers, wounds, burns, ulcers, osteoporosis, autoimune diseases or concers, and in the recombinant production of a protein. The polypeptides are also useful in generating antibodies, as molecular weight markers, con and as food supplements. The present sequence represents a human contig sequence used in an example of the invention. Note: The sequence data for this patent did not form part of the princed specification, but was for spatent did not form part of the princed specification, but was for the polypeptides of the invention.
                                                                                                                                                                                                                                                                          멂
                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                    AAL34845 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             417;
                                                                                                                                                                                                                                                                                                               992
                                                                                                                                                                                                                                                                                                                                                         147
                                                                                                                                                                                                                                                                                                                                                                                                932
                                                                                                                                                                                                                                                                                                                                                                                                                                          207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                447
                                                                                                                                                                                                                                                                                                                 TATCAGAATTITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA 1049
                                                                                                                                                                                                                                                                                                                                                                                          TATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTG 991
                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĊĊĠĀŢĠĠĊŦŢŢŦŖŢĀĠĠĀŢĊĀŢŦĠĊĀĊĀĠŦĀŢĀĀĠŦŢŢĂŢĊĊŢĀĠĊŢŦŢŦĠĀĠĀĀŢĠĊĀĠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACCTTACATCGAGGTCGATTCCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTG
                                                                                                                                                                                                                                                                          TATCAGAATTTTCTCACACCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP; 113 A; 103 C; 101 G; 130 T; 0 U;
                                                                                                                                                                  cDNA; 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 416.4; DB 9;
Pred. No. 8.8e-125;
0; Mismatches 1;
                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                            148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                                                                                                                                                           88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
ARRESULT 4
ARBYTE 64
ARBYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                            Human; ORF; open reading frame; ORFX; drug screening; diagnosis; disease monitoring; cytokine; cell proliferation; cell differentiation; immune modulation; haematopoiesis regulation; tissue growth; angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic; thrombolytic; tumour inhibition; bodily characteristic; fertility; behaviour; cancer; proliferative disorder; neurological disorder; cardiovascular disease; immune system disorder; organ transplantation; tissue growth disorder; tissue regeneration disorder; diabetes mellitus; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; vasotropic; antiabeterosclerotic; anticoagulant; thrombolytic; neuroprotective; antiatherosclerotic; antialnamatory; immunomodulator; cardiant; hypotensive; antithyroid; antibacterial; fungicide; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human ORF3553 cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUL-2002
                                                                 24-MAY-2000; 2000US-0206690P
                                                                                                                           24-MAY-2001; 2001WO-US017076
                                                                                                                                                                                                                                                              WO200190366-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABN78606
   (CURA-) CURAGEN CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTTTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGAGCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAATTITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTITICATCICAAGAGTITITGGGGCCTAGTATICAAGGACTGA 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTTTGAACAATCCAAGAAAGAAGCCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO:7105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1236
```

```
Leach MD,
                     Shimkets RA;
```

Novel human polypeptides and polynucleotides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, hyperproliferative disorders and disorders related to organ transplantation.

English

CC designated ORF (open reading frame) 1-4534 novel human proteins CC designated ORF (open reading frame) 1-4534, and sequences ABN75054-CC ABN79587 represent cDNAs encoding them. The invention also encompasses CC polypeptides at least 80% identical to the ORF1-ORF4534 (collectively CF referred to as ORFX) proteins, polymucleotides at least 85% identical to the ORF1-ORF4534 (collectively CF CRYX nucleic acid sequences, vectors and host cells comprising ORFX CC polymucleotides, the recombinant production of ORFX proteins, antibodies of polypeptides, methods of screening for modulators of ORFX proteins, antibodies of polypeptides, methods of screening for modulators of ORFX proteins and cc polypeptides, methods of screening individuals for a predisposition to an ORFX proteins of the invention have a wide crange of biological activities, such as cytokine, cell proliferation, tested growth, angiogenesis, activin on inhibin activity, chemotactic/ CC receptor/ligand, antiinflammatory activity, tumour inhibition activity, chemotactic/ CC receptor/ligand, antiinflammatory activity, tumour inhibition activity, chemotactic/ CC receptor/ligand, antiinflammatory activity, tumour inhibition activity, chemotactic/ CC receptor/ligand, and antibodies may be used in the treatment of cancers, complete acids and antibodies may be used in the treatment of cancers, concleic acids and antibodies may be used in the treatment of cancers, constitution and other pathogens. ORFX mucleic acids may adapt tumours, and confidency in the pathogens of proteins, and confidency in the detection of ORFX genomic sequences of source of primers and probes, in the detection of ORFX genomic sequences of sequences, in the detection and other service set of seases caused by viral, bacterial, confidency in the pathogens of the foreign of ORFX proteins may also be used as a cc source of primers and probes, in the detection of ORFX genomic sequences of mucleic acids may adapt the function and or activity of ORFX which may be useful for studying the functio

Sequence 597 BP; 171 A; 145 C; 124 G; 157 T; 0 U; 0 Other;

Query Match Best Local S

594;

Conservative

0

Indels Length

۲,

Gaps

Similarity

39.8%;

Score 581.2; DB 6; Pred. No. 1.7e-178; Mismatches

Matches 702 462 TCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTT 60 GGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTT TAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACAG 701 GAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGCT GAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCT CAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCCACTAACCTACCCAATACTTGGA 581 TCATGAAGAGTCCCCG-AAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGTT 761 641 239 119 59

밁

5

S 밁 Ś 片

5 밁 S

```
The invention relates to 971 novel human cDNA sequences (ADC29919-CC ADC2988) and the polypeptides they encode (ADC30890-ADC31860). The companion also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression CC vectors and host cells comprising a nucleic acid of the invention; the recombinant production of a polypeptide of the invention; an antibody against a polypeptide of the invention; an enthod of detecting color invention further discloses methods of a polypeptide of the invention. The compound which binds to a polypeptide of the invention. The convention further discloses methods of peventing, treating or and/or monoclonal antibodies for carrying out the methods of the convention, methods for the identification of compounds that modulate the conversion or activity of the polypucleotide and/or polypeptide; and 767 contig sequences corresponding to the CDNA sequences of the invention are constilled. ADC32627) and the polypeptides of the invention are constilled in diagnostics, drug screening, forensics, gene mapping, in the contification of mutations responsible for genetic disorders or other traits, for assessing biodiversity, and in producing many other types of data and products dependent on DNA and amino acid sequences. They are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet discorder; wound; burns; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic; gene therapy; chromosome 8; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New polynucleotide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or
                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Haley-Vicente
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-SEP-2001; 2001US-0324631P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-SEP-2002; 2002WO-US030474.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003029271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADC30307 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADC30307;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003-371981/35.
DB; ADC31278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TY, Zhang J, Ren F, P, Ghosh M, Wang D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 389; 1185pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCTAGTATTCAAGGACTGA 1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG 1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xue AJ, Zhao QA,
Ma Y, Asundi V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO:389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang J,
Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wehrman T;
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                 밁
                                                                                            S
                                                                                                                                    밁
                                                                                                                                                                 Ś
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                         뭥
                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                              片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ភិនិសិស្តិសិស្តិសិស្តិសិស្តិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Sim
Matches 1361;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 also used for treating diseases such as Parkinson's disease, Alzheimer's disease and other neurodegenerative diseases, anaemia, platelet disorders, wounds, burns, ulcers, osteoporosis, autcommune diseases or cancer. The nucleic acids may also be used as hybridisation probes or primers, and in the recombinant production of a protein. The polypeptides are also useful in generating antibodies, as molecular weight markers, and as food supplements. The present sequence represents a specifically claimed human CDNA sequence of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2304 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ftp.wipo.int/pub/published_pct_sequences.
                                                                 1152
                                                                                                                                      1092
                                                                                                                                                                                                       1032
                                                                                                                                                                       757
                                                                                                                                                                                                                                        697
                                                                                                                                                                                                                                                                           972
                                                                                                                                                                                                                                                                                                           637
                                                                                                                                                                                                                                                                                                                                                                                                               852
                                                                                                                                                                                                                                                                                                                                            912
                                                                                                                                                                                                                                                                                                                                                                             577
                                                                                                                                                                                                                                                                                                                                                                                                                                              517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT
                              GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT
                                                                   GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT
                                                                                     GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT
                                                                                                                                      TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                                            TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                                                                                       GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA 1091
                                                                                                                                                                                                                               GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                                                                                                                                                         AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                                                           AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                                                                                                                  TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTTGCAGTCCAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                               GTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGTGGTCCCCGCTGACGGGGGAGAACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGGATTGACCTTCAACAGGAAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGGATTGACCTTCAACAGGAAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAGATGGACATACAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    639 A; 521 C; 535 G; 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1358.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Τ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
   1271
                                                                                                                                      1151
                                                                                                                                                                                                                                                                           1031
                                                                                                                                                                                                                                                                                                           696
                                  936
                                                                     1211
                                                                                                                                                                       816
                                                                                                                                                                                                                                                                                                                                                                             636
                                                                                                                                                                                                                                                                                                                                                                                                               911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  491
                                                                                                                                                                                                                                                                                                                                              971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            611
```

```
B
                                                     Ś
                                                                                   밁
                                                                                                           Ş
                                                                                                                                                B
                                                                                                                                                                        8
                                                                                                                                                                                                    B
                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to full length GENSET human nucleic acids encoding CC potentially secreted proteins. The nucleic acids and the polypeptides CC they encode may be used in the prevention, treatment and diagnosis of Cd iseases associated with inappropriate GENSET gene expression. For CC example, they be used to treat disorders associated with decreased GENSET CC geneme that affect the activity of GENSET or by supplementing the CC patients own production of GENSET polypeptides. Conversely, antisense CC nucleic acid molecules may be administered to down regulate GENSET CC expression. The sense and antisense nucleic acids may also be used as DNA CC patients may be in need of restorative therapy. The GENSET polypeptides of CC similar nucleic acid sequences in samples, and hence to determine which CC patients may be in need of restorative therapy. The GENSET polypeptides may be used as antigens in the production of antibodies and in assays to CC identify modulators (agonists and antagonists) of GENSET polypeptides conversion and activity. The present sequence is a GENSET mucleic acid of the invention
                                                                                                                                                                                                                                                                                                                                 Best Local Sim
Matches 1458;
                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety o diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; secreted GENSET; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-DEC-1999; 99US-0169629P
06-MAR-2000; 2000US-0187470P
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1942 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-DEC-2000; 2000WO-IB001938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                         241
                                                                                      619
                                                                                                                   181
                                                                                                                                                   559
                                                                                                                                                                               121
                                                                                                                                                                                                             499
                                                                                                                                                                                                                                                                         439
 301
                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Page 606-607; 921pp; English
                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAG89164.
                                                                                                                   GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                  AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                             TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                             TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                         ATGALAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                                                                                                                                                                               ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                          GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                <u>AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGGAG</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                            545 A; 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                               99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bougueleret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene therapy; vaccine; treatment;
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                               Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                Score 1445.8;
                                                                                                                                                                                                                                                                                                                                                                                            C; 462 G; 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jobert
                                                                                                                                                                                                                                                                                                                                                                                            T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                 DB 5;
                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                 Length 1942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diagnosis;
                                                                                                                                                                                                                                                                                                                                   1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   б
Б
   360
                                                                                          678
                                                                                                                                                                                  180
                                                                                                                                                                                                               558
                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                            498
                              738
                                                           300
                                                                                                                      240
                                                                                                                                                     618
                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                             밁
                                                                      8
                                                                                                        뭐
                                                                                                                                                                  밁
                                                                                                                                                                                             Ş
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                 1381
                                                                                                                                                                                                                               1578
                                                                                                                                                                                                                                                                                          1519
                                                                                                                                                                                                                                                                                                                       1081
                                                                                                                                                                                                                                                                                                                                                                                                                1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGG
                                                GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                     AAGGTGTGGGGTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA 1260
                                                                                                                                                                                                                               GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                 GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC 1200
                                                                                                                                                                                                                                                                                            <u>AAGCTGAAGGGT-AGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG</u>
                                                                                                                                                                                                                                                                                                                   AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                    GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                 GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAGGCCACTGAAACTGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGTGTATGTACAGTCATACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGTGTATATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                            1577
                                                                                                                                                                                                                                                                                                                         1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                   1817
                                                                                                                                                                        1697
                                                                                                                                                                                                                                  1637
                                                                                                                                                                                                                                                                                                                                                      1518
                                                                                                                                                                                                                                                                                                                                                                                                                   1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1038
                                                                                                                                                                                                                                                                                                                                                                                      1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            798
```

```
В
                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                            Ś
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This invention relates to the DNA and protein sequences of novel isolated CC polynucleotides 80090, 52874, 52880, 63497, or 33425 encoding novel CC fucosyl transferase, seven transmembrane receptor, or Rho GTPase-CC activating protein (RhoGAP) family members. The DNA and protein sequences CC of the invention are useful for identifying a compound capable of CC treating a disorder by aberrant expression of the nucleic acid or the CC diagnosis. The invention also comprises a method for treatments and in CC diagnosis. The invention also comprises a method for treatments and in CC diagnosis. The invention also comprises a method for treatments and in CC diagnosis. The invention also comprises a method for treatming a disorder cusing a modulator of the proteins activity. This method is useful for CC cardiovascular (including endothelial cell), haematopoieteic, blood coversel and brain disorders. It is also useful in treating pain and CC protein sequences are also useful in treating proliferative disorders (e.g. acute leukaemia), cardiovascular disorders (e.g. cardiac CC e.g. acute leukaemia), cardiovascular disorders (e.g. cardiac CC hypertrophy, myocardial infarction, rheumatic fever), endothelial cell disorders (e.g. psoriasis, Crave's disease, rheumatoid architis), CC disorders (e.g. psoriasis, Crave's disease, rheumatoid architis), CC disorders (e.g. psoriasis, Crave's disease, rheumatoid architis), CC crom's disease, asthmal, blood vessel disorders (e.g. Kaposi sarcoma), CC degenerative disorders (e.g. Alzheimer disease), and hormonal disorders. The sequences of the invention are also useful as query sequences. CC represents the cDNA sequence encoding the human 80090 protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Sim
Matches 1459;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1669 BP;
                                                                                                                                            583
                                                                                                                                                                                                                                                                                                        463
                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                       403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      343
                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Fig 1; 184pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                     AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                 AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                     AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                  ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCCATCAACCGGACCTAC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCCTTTATCTAACACCAGGAGCAGCGGGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                            TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                    TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCCGAAA 480
                                                                                                                                                                                                                           AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCTGCTGACGGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG 180
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1457.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           G; 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٦;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                    540
                                                                                                                                            642
                                                                                                                                                                                                                           582
                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                        522
                                                                                                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

RESULT 2
AAH64767
ID AAH6
XX
AC AAH6
XX
DT 11-S
XX
XX
T1-S
XX
XX
DE Huma

AAH64767

standard; cDNA;

Human secreted protein cDNA,

SEQ ID NO:

43

(first entry)

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
S
                                    밁
                                                            Ś
                                                                                       밁
                                                                                                                   Ś
                                                                                                                                                 멍
                                                                                                                                                                         S
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                    1321
                                                                                                                                                                                                                                                                                                                                                                                1183
                                    1543
                                                              1381
                                                                                          1483
                                                                                                                                                 1423
                                                                                                                                                                              1261
                                                                                                                                                                                                         1363
                                                                                                                                                                                                                                    1201
                                                                                                                                                                                                                                                                1303
                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                        1243
                                                                                                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                                                                                                                                                       1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
    GGCCTAGTATTCAAGGACTGA 1461
                                    GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                  GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGG
                                                                                          GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                         GAAGATACCCACCTGAGTTGCCCCAGAGGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                         AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGGCTTACCACCCAAAAAGATGGGAGGCA
                                                                                                                                                                                                                                   AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                        AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                          AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                     GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCACTCCGATACCTAGTTCCTTTGCAGTCCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAACACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                 1440
                                                                                            1542
                                                                                                                                                    1482
                                                                                                                                                                                                            1422
                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                           1302
                                                                                                                                                                                                                                                                                                                                                                                  1242
                                                                                                                                                                                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                                                                                                                                                                                          1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1002
                                       1602
                                                                                                                                                                                                                                        1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
```

```
Minimum DB
Maximum DB
                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                         seq length:
seq length:
                                                                                                  N_Geneseq_29Jan04:*
1: geneseqn1980s:*
2: geneseqn1990s:*
3: geneseqn2000s:*
4: geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-080-960-3
1461
                                                                                                                                                                                                                                                                                                                                                             3373863 segs, 2124099041 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  September 12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                atgaaagtcacgggccctcc.....gcctagtattcaaggactga 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                   geneseqn2003bs:*
geneseqn2003cs:*
                                                    geneseqn2001bs:*
geneseqn2002s:*
geneseqn2003as:*
geneseqn2004s:*
                                                                                                                                                                                                                                                                           20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16:57:53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                i3 ; Search time 412.627 Seconds
(without alignments)
15041.697 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                               6747726
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Ω	O	Result No.
222	111111111111111111111111111111111111111	4444466	0.
55.2 5.2 5.2 5.0 5.0	180 179 162 162 162 162 139 107 107 107 107 107 107	1457.8 1445.8 1358.6 581.2 416.4 323.8 323.8 300	Score
4. ພ ພ ພ ກ ໝ ໝ ໝ	77901111222	80088CCCC	Query Match
398 543 470 997	1479 1431 1431 1804 1804 1328 4277 4277	1669 1942 2304 597 447 378 378 1061	Length
ហេសេស	6 6 4 C C C C C C C C C C C C C C C C C	α τυ υ α ο υ α α ο α α	B
AAF64428 ABV15942 ABV45741 ABV30232	ABA05334 ABA05333 ABL07657 ACC62479 ACC62500 ACK62500 ABK11711 AAS41344 ACH14839 ABL07656	ABK53075 AAH64767 ADC30307 ABN78606 ADC32194 AAL34845 ABX57833 ADC30780 ABS67785	מו
Aa164428 Novel hum Abv15942 Human pro Abv45741 Human pro Abv30232 Human pro	Human Human Drosop Human Human Human DNA er CDNA er Human	cDNA e Human Human Human Human Human Human Human Human CDNA e Human	Description

Novel 80090, 52874, 52880, 63497, and 33425 polynucleotides for preventing or treating e.g. cancer, cardiovascular, hematopoietic or

WPI; 2002-463309/49. P-PSDB; AAU97908.

2.9 506 6 2.9 2000 7 2.7 23823 4 2.7 110000 7 2.6 605 3 2.6 605 3 2.6 2198 3 2.5 12598 3 2.6 12598 3	42.4 2.9 506 6 AB041711 42.4 2.9 506 6 AB041711 42.4 2.9 500 7 ADA71938 41.2 2.9 2000 7 ADA71938 39.4 2.7 23825 4 AAK79160 39.4 2.7 23825 4 AAK79161 39.4 2.7 110000 7 AB279565 37.6 2.6 605 6 ABT12333 37.6 2.6 605 7 AC091627 37.4 2.6 605 7 ADA91937 37.2 2.6 2198 3 AAA591937 37.2 2.6 2198 4 ABL11867 36.8 2.5 7498 6 ABL11867 36.8 2.5 129021 3 AAF22296 36.6 2.5 129021 3 AAF22296 36.2 2.5 3194 2 AAT59505 36.2 2.5 3194 2 AAT59503 35.4 2.4 1040 4 AAC90431 35.2 2.4 11849 7 ADA71744 35.2 2.4 11849 7 ADA71744 35.2 2.4 1241 4 AAF17913
2.4 2.9 506 6 ABQ41711 2.4 2.9 506 6 ABQ41710 2.2 2.9 2000 7 ADA71938 1.2 2.8 2000 7 ADA71938 9.4 2.7 23823 4 AAK79161 9.4 2.7 23823 4 AAK79161 9.4 2.7 110000 7 ABZ79565 9.4 2.7 110000 7 ABZ79565 9.6 2.6 605 3 AAA56911 9.6 2.6 605 3 AAA56911 9.6 2.6 605 3 AAA59133 7.6 2.6 605 7 ABZ12333 7.6 2.6 805 7 ABZ12333 7.6 2.6 105 3 AAA59937 7.2 2.6 2198 3 AAA59937 7.2 2.5 1298 6 ABL11867 6.8 2.5 1298 4 ABL11867 6.8 2.5 1299 4 ABL11867 6.8 2.5 1299 4 ABL11867 6.8 2.5 129021 3 AAF22296 6.0 2.5 1314 2 AAT59505 6.2 2.5 3594 2 AAT59505 6.2 2.5 3594 2 AAT5971744 5.2 2.4 11049 7 ABZ13734 5.2 2.4 11745 6 ABZ2333 3.5 2.4 241 4 AAF17913	2.4 2.9 506 6 ABQ41711 Abg- 2.4 2.9 506 6 ABQ41710 Adg- 2.2 2.9 2000 7 ADA71938 Ada- 1.2 2.8 2000 7 ADA71938 Ada- 1.2 2.8 23823 4 AAK79160 Aak- 9.4 2.7 23823 4 AAK79160 Aak- 9.4 2.7 110000 7 AB279565 O Aak- 9.4 2.6 605 6 AB712333 AAA56911 Aac- 7.6 2.6 605 7 AAA56911 Aac- 7.6 2.6 605 7 AAA56912 Aac- 7.6 2.6 605 7 ABL12323 7.6 2.6 605 ABL32256 ABL3
2.9 506 6 ABG/41711 2.9 506 6 ABG/41710 2.9 2000 7 ADA/71938 2.7 23823 4 AAK79160 2.7 23823 4 AAK79160 2.7 110000 7 ABZ79565 2.6 605 6 ABT12333 2.6 605 6 ABT12333 2.6 605 6 ABT12333 2.6 605 6 ABT12323 2.6 7498 6 ABL11867 2.5 1298 3 AAAS-69116 2.5 1298 3 AAAS-69162 2.5 1298 3 AAAS-69162 2.5 1298 3 AAAS-69162 2.5 1578 6 ABL12226 2.5 1578 6 ABL12226 2.5 1590 7 ABL12226 2.5 1590 7 ABL13229 2.4 11745 6 AAT85219 2.4 11849 7 AAAT85219 2.4 11849 7 AAAT8521	2.9 506 6 ABQ41711 Abq 2.9 506 6 ABQ41710 Abq 2.9 2000 7 ADA71938 Ada 2.7 23823 4 AAK79160 Aak 2.7 23825 4 AAK79160 Aak 2.7 110000 7 ABZ79565 0 Aak 2.7 110000 7 ABZ79565 0 Aac 2.6 1061 3 AAC40119 Aac 2.6 605 3 AAA56911 Aac 2.6 605 7 ACD91627 Acd 2.6 2198 3 AAA59937 Aac 2.7 129021 3 AAF2226 Abl 2.5 1298 4 ABL111866 Abl 2.5 129021 3 AAF22296 Aac 2.5 1394 2 AAT85950 Aac 2.6 1060 4 AAC90431 Aac 2.4 1060 4 AAC90431 Aac 2.4 1744 AAF17913 Aaf6
9 506 6 AB041711 9 506 6 AB041711 9 2000 7 ADA71938 7 23823 4 AAX79161 7 110000 7 ABX79569 7 110000 7 ABX79569 7 110000 7 ABX79569 7 10000 7 ABX795691 7 110000 7 ABX795691 7 110000 7 ABX795691 7 10000 7 ABX795691 7 10000 7 ABX795797 7 10000 7 ABX795797 7 10000 7 ABX795797 7 10000 7 ABX79937	9 506 6 ABO41711 Abdr 9 2000 7 ADA71938 Adda 1 23823 4 AAK79160 Ada 1 23825 4 AAK79161 Ada 1 23825 4 AAK79161 Ada 1 23825 4 AAK79161 Ada 1 10000 7 ABZ79565 O Ada 1 10000 7 ABZ79567 Ada 1 10000 7 ABZ79567 Ada 1 10000 7 ABZ79797
6 6 ABQ41711 6 6 ABQ41711 6 6 ABQ41711 6 6 ABQ4171138 0 7 ADA71938 0 7 ADA71938 0 7 ADA779161 5 4 AAK79160 5 4 AAK79161 7 ABZ79565 1 3 AAA65911 5 3 AAA6591 8 6 ABI12333 5 AAB1123256 8 4 ABI11866 1 3 AAF22296 4 2 AAT59501 6 1 3 AAF2296 4 2 AAT59501 6 1 3 AAF2296 6 1 3 AAF2293 7 AAD4717913	Abc. ABC41711 Abc. ABC41711 Abc. ABC41710 ADC. ADA71938 Ada ADA71938 AAA AAK79160 AAA AAK79161 AAA AAK79161 AAA AAK79161 AABC11233 AAC40119 AAC12333 AAC40119 AAC12333 AAA512333 AAA517937 AAA517937 AAA517937 AAA517937 AAA61 AAC90461
ABQ41711 ABQ417193 ABQ471938 ADA71938 ADA71938 AAK79160 AAK79161 ABZ79565 AAC40119 AAA56911233 ACB91627 AAA579133 ACB11233 ACB12226 ABL11866 AAF22296 AAF22296 AAT85219 AAT85219 AAC91431 ABC91431 ABC91431 AAC91431 AAC91431 AAC91431 AAC91431	ABQ41711 ABQ41711 ABQ417110 ABQ4171938 ADA71938 ADA71938 ADA71938 ADA79160 AAK79160 AAK79161 ABZ19565 AAK79161 ABZ12333 AAZ69111 ABZ12333 ACQ4 AAAS6911 ABZ12333 ACQ4 AAAS6911 ABZ12333 ACQ4 AAAS6911 ABZ12333 ACQ4 AAAS6911 ABZ12236 AAZ69137 ABZ132256 AAZ69137 ABZ132256 AAZ69137 ABZ132256 AAZ69137 ABZ132256 AAZ69137 ABZ132256 AAZ69137 ABZ132236 AAZ69137 A
	Abq Abq Ada Ada Aak Abc Abc Abc Abc Abc Abc Abc Aaa Aaa Aaa Aaa Aaa Aaa Aaa Aaa Aaa Aa

ALIGNMENTS

ABK53075 standard; cDNA; 1669

BP.

Human; gene; ss; 80090; fucosyl transferase; cancer; Grave's disease; seven transmembrane receptor; Rho GTPase-activating protein; RhoGAP; cardiovascular disorder; haematopoieteic disorder; brain disorder; blood vessel disorder; metabolic disorder; liver disorder; psoriasis; platelet disorder; leukaemia; cardiac hypertrophy; Crohm's disease; myocardial infarction; rheumatic fever; multiple sclerosis; asthma; rheumatoid arthritis; diabetes mellitus; blood vessel disorder; Kaposi sarcoma; Alzheimer's disease; hormonal disorder. 20-OCT-2000; 2000US-0241992P. 20-OCT-2000; 2000US-0242038P. 20-OCT-2000; 2000US-0242040P. 23-OCT-2000; 2000US-0242637P. Glucksmann MA, Meyers R; Homo sapiens. 19-OCT-2001; 2001WO-US048307. 25-APR-2002. WO200232962-A2. cDNA encoding human 80090 protein. 13-AUG-2002 ABK53075; (MILL-) MILLENNIUM PHARM INC (first entry) Location/Qualifiers 163. .1451 /*tag= a /product= "Human 80090 protein"

This Page Blank (uspto)

```
B
                                                                      Š
                                                                                                              멍
                                                                                                                                            Ş
                                                                                                                                                                                       В
                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 710; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                         28437
                                      28317
                                                                                                                28377
                                                                          505
                                                                                                                                                  445
  565
                                                                                                                                                                                                               385 TTCCTCTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAAGCCCAT 444
                                                            CCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA 564
ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG 624
                                        CCAGTCATCACCTTATTCAACCATACGGCCACATTCAGCAGGCATTCCCACTTGCCACTG 2825
                                                                                                                CATGACTGGGCGCTTTTCCATGAAGAGTCCCCCAAAAACAATTATAAGCTCTTCCATAAA
                                                                                                                                                  CATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAA 504
                                                                                                                                                                                           TTTTTCCTCCCAGGTACTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6544
7747
7847
13258
13258
13358
13358
24978
25078
89756
89856
122322
122322
122322
167656
                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_fragment
clone_end:SP6
vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="genomic_DNA"
/db_xref="texon:10090"
/clone="RP23-125P1"
/clone="RP23-125P1"
/clone lib="RPCI-23 Female Mouse BAC"
                                                                                                                                                                                                                                                                                                                                                        clone_end:T7
vector_side:right"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
89856. .122321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
67756. .191072
                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
122422. .167655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="assembly_fragment"
25078. .89755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3987. .4944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
3358. .24977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3886: contig of 1482 bp in length
3986: gap of 100 bp
4944: contig of 958 bp in length
5044: gap of 100 bp
6443: contig of 1399 bp in length
6443: contig of 1399 bp in length
6443: contig of 1203 bp in length
7746: contig of 1203 bp in length
7846: gap of 100 bp
13257: contig of 5411 bp in length
13357: gap of 100 bp
24977: contig of 11620 bp in length
25077: gap of 100 bp
24977: contig of 64678 bp in length
25077: gap of 100 bp
89555: gap of 100 bp
122321: contig of 64678 bp in length
167655: contig of 45234 bp in length
167655: contig of 45234 bp in length
167755: gap of 100 bp
167655: contig of 45234 bp in length
167755: gap of 100 bp
19972: contig of 32466 bp in length
167755: gap of 100 bp
19972: contig of 45234 bp in length
                                                                                                                                                                                                                                                                                 42.8%;
83.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .6443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .2304
                                                                                                                                                                                                                                                                 Score 626; DB 2; Length 191072; Pred. No. 3.9e-192; 0; Mismatches 140; Indels 0;
                                                                                                                                                                                                                                                                   Gaps
                                                                                                                28318
                                                                                                                                                                                           28378
                                                                                                                                                                                                                                                                   0
```

Search completed: September 13, 2004, 00:41:51 Job time : 3895.02 secs

```
RESULT 15
AC115775/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
E 2 (bases 1 to 191072)

Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Sarren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Sanderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Changel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Liu, G., MacLean, C., MacConald, P., Major, J., Marguis, N., Mathews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1596
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Schurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 1910/2)
Birren,B.; Nusbaum,C. and Lander,E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC115775 191072 bp DNA Mus musculus clone RP23-125P1, WORKING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus, clone RP23-125P1
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTG; HTGS_PHASE1; HTGS_DRAFT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC115775.5 GI:28475880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTG 1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTATAAAATACTGGCACAGTACAAGTTCATTCTTGCTTTTGAAAATGCTATCTGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTACAACTCAAGAATTTTGGATGCTTGTATTCAAACAATAA 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT 1420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCCCAGAGGTGGAGTGCTCAGGTTAACCATCTGAACTGCCCAAACCTGAGGCTTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGAGTGCATGGTGTAACAGAGTGTGGGAAAACATCAGAAGAAAAAAAGGGATGGC 1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTAC 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAATGAAGGAACGCAAATGGGGAGTGCAAGATGTCACTCAGGACAATTATATTGACACAT 1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT 1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTCACACCCCTCGAGAGCTGGCCCGCTATATCAAAACACTGGATCAAAATGACCAGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCTCCCAGCATTATCGACTGGCTTCCCCAGCAACAAGAGTGCAATCTTGGTATCTAGTT 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATATTACG 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGAGCAGTCCAAGAAGGAAGCCTGGGCGCTGAGGCAGCTGGTGGAAAGGAACAGGAATT 1595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTCTCCTCTTC----AAATCCCAGCCAGAGCTCCCTCCAAGAGATGTGGATAGCAAGTT 1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAGGCCTACCTGGAATGGAAACTGAAAGGAGACATTTCCAATCCAAGGCTGCTTACAG 1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTATATCACTGAAAAACTCTGGCGGCCTCTGATGCTGGGAGTGGTACCTGTGTACTTTG 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear HT DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HTG 24-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1059
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y., Collymore, A., Cooke, P., Corum, B., DeArellano, K., Diaz, J.S., Dodge, S., Doley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pierre, M., Hafez, M., Hagopian, D., Hagos, B., Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., Lui, A., Mabbitt, R., MacLean, C., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., O'Neil, P., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Stubbs, M., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Direct, Subrission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Travis, N., Trigilio, J., Vassiliev, H., Vio, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Ycung, G., Zathoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (22-MAR-2002) Whitehead Institute/MIT Center for Research, 320 Charles Street, Cambridge, MA 02141, USA 15 (bases 1 to 191072) Birren,B., Nusbaum,C., Lander,E., Abouelleil,A., Allen,N., Anderson,S., Arachchi,H.M., Barna,N., Bastien,V., Bloom,T.
                                                                                                                                                                                                             * NOTE: This is a 'working draft' sequence. It currently consists of 12 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (24-FEB-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Feb 24, 2003 this sequence version replaced gi:28460929. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Summary StaTistics
Sequencing vector: plasmid; n/a; 100% of reads
Sequencing vector: plasmid; n/a; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.960731
Consensus quality: 189135 bases at least Q40
Consensus quality: 189100 bases at least Q30
Consensus quality: 189100 bases at least Q20
Insert size: 189800; agarose-fp
Insert size: 189800; agarose-fp
Quality coverage: 11.0 in Q20 bases; sum-of-contigs
Quality coverage: 10.9 in Q20 bases; sum-of-contigs
                                                                                                                                                                     as soon as it
be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center project name: L23395
Center clone name: 125_P_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----- Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Web site: http://www-seq.wi.mit.edu
    1012
1112
2305
                                                                                                                             1011:
contig of 1011 bp in length
gap of 100 bp
contig of 1193 bp in length
gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for Genome
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
GGA535692
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                              gene
                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            701
                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (19-DBC-2002) Oriol R., Glycobiology, Submitted (1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Candelier, J.J., Martinez-Duncker, I., oriol, R. and Mollicone, R. Cloning expression and genomic organization of a new human alpha3-fucosyltransferase (FUT10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AJ535692.1 GI:27368920
alpha3-fucosyltransferase;
Gallus gallus (chicken)
Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; (Archosauria; Aves; Neognathae; Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGA535692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGAGGCCTATGTAGAATGGAAGCTGAAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCTCAATGAACGGGAGTGGGGTGTGCAGGACATTAACCAGGACAACTACATTGACTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAGACCTATGTAGAGTGGAAGCTAAAGGGCAAGATCTCTAACCAGCGGCTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCCCCCACCATCGCCGACTGGCTTCCAAGTAACCGAAGCGCCATTCTGGTGTCGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTACATCACAGAGAAGTTCTGGAGACCACTGAAACTGGGGGTCGTGCCCGTGTATTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACAGAACAGAGATCTTCCCCAGCAGCTGAAAAACCCCCGCCTCCATGGATGCTGATGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAGTTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTCTCACCCCAGAGAGCTGGCGAGCTTCATTAGGAGACTGGATTATGACGATGGGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u> АСТАСАТСАСТСАGAAGTTСТGGAGGCCAСТGAAAСТGGGGGTAGTCCСТGTATATTACG</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTACAGAGTCATTGCCCAGTATAAGTTCATCCTGGCCTTTGAGAATGCGGTCTGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAAGACAAAAACTGGCCCCATTGGTATATGTTCAGTCGGACTGCGATCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 1657)
                                                                                                                                                                                                                                                                                   Vaillant-Couturier, 94
ted sequence: AJ512465.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gallus mRNA
/gene="FUT10"
210. .1529
/gene="FUT10"
/function="adds f
                                                                                                           /organism="Gallus gallus"
/mol_type="mRNA"
/db_xref="taxon:9031"
,. .1657
                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1657 bp
putative
   fucose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUT10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA linear VRT 23-DEC-2002
alpha3-fucosyltransferase (FUT10
in alpha1-3 linkage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene.
                                                                                                                                                                                                                                                                                                                                                INSERM U504,
   to GlcNAc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1599
                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            760
                                                       g
                                                                                                        S
                                                                                                                                                     밁
                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polyA_signal
                                                          940
                                                                                                                                                                                                                                                                                      820
                                                                                                                                                                                                                                                                                                                                                641
                                                                                                                                                                                                                                                                                                                                                                                                                                                              581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       640
                                                                                                                                                                                                                            701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
   TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                          TGCATAACAGAGACCTTCCTCAGCATCTCAGAAATCCATCTGCCATGGATGATGGGAACT
                                                                                                                 TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT
                                                                                                                                                                                                                   GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT 760
                                                                                                                                                                                                                                                                                         TGAGGAAGCGGCTTGCACCACTTGTGTATGTGCAGTCTGACTGCAATGCTCCTTCTGACC
                                                                                                                                                                                                                                                                                                                        TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                    AGAGCATAGAGGTCCTCAGGTCCTTGAGACATATGATCCCAGTGCAGATGAAGAACAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAACCACACTGCAACTTTCAGCCGCCATTCTCACCTACCGCTGACCACTCAGTACCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCATGAGGAATCACCAAAAAACAACTACAAACTTTTCCATGAACCAGCTATCACCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGACTTCAGTATAGACAGCTTACCCCTTCCTCGAAAAGACCATCATGATTGGGCCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTACTATTAACAAGACGTACCAGCACAGTCAGATGACAAGAGCTTTTTTGTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTCCCCGCTGACGGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACTTTATAGCAACTTCAGGACAGAGCCTGATACAGATCACTACCCCATCCTGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTGACCTTCAACAGGAAAAGGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGCCCACTGAAGCCTGATGAGAGACATGC-----TTCGCAGCTTAAGAAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTTATCACTGAACTGGGAAATTCGGAGAATAAGGCACCAGCAGTCTCCAGTTTACACA 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAAGGAGTTTAAAAAGTTCCAGTTTGCAAG 160
                                                                                                                                                                        GGGACAGCTATGTACGTGÁGTTGÁTGTGCCÁCATTGAAGTAGÁCTCTTÁCGGAGAÁTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
/product="gutative alpha3-fucosyltransferase"
/product="gutative alpha3-fucosyltransferase"
/protein_id="CAD59689.1"
/db_xref="GCA:QBA9689.1"
/db_xref="GCA:QBA9689"
/db_xref="GCA:QBA9689"
/db_xref="SPTREMBL:QBA9689"
/db_xref="SPTREMBL:QBA9689"
/db_xref="SPTREMBL:QBA9689"
/translation="MYRWRERKELWASCICFAAFFFLLVTLQVITELGNSENKAPAVSS
/translation="MYRWR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WENIRREEKGWLPQRWSAQVNHLNCPNLRLSGSPLQIPARAPSKRCG<sup>,</sup>
1632. .1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="FUT10"
1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KTLDQNDQEYEAYLEWKLKGDISNPRLLTAMKERKWGVQDVTQDNYIDTFECMVCNRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 657.4; DB 5;
Pred. No. 9.4e-203;
0; Mismatches 411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1657;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                             700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                          999
                                                                                                                                                                        939
                                                                                                                                                                                                                                                                                         879
                                                                                                                                                                                                                                                                                                                                                                                                       819
                                                                                                                                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             399
```

```
REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BC062113
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Schamen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.L., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Houg, L.,
Staplecon, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Villalon, D.K., Miting, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                               info@bcgsc.bc.ca
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Susanna Chan, Readman Krzywinski, Reta Xutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline
Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BC062113 2978 bp 1
Mus musculus fucosyltransferase 10,
IMAGE:6816067), complete cds.
                                                                                                                                                                                                                                                                      Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLN/L at: http://image.llnl.gov Series: IRAK Plate: 132 Row: h Column: 16 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
Tissue Procurement: M. Bento Soares, University of Iowa
CDNA Library Preparation: M. Bento Soares, University of Iowa
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
BC Cancer Agency, Vancouver, BC, Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (13-NOV-2003) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Strausberg, R.
                                                                                                                                                                                                                                             analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    karyota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
mmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
(Dases 1 to 2978)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 2978)
/db xref="taxon:10090"
/clone="MGC:69807 IMAGE:6816067"
/tissue_type="Brain, mouse, 13.5, 14.5, 16.5, 17.5
                                                                                     /mol_type="mRNA"
/strain="C57BL/6"
                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                 organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA linear ROD 11-DEC-2003
, mRNA (cDNA clone MGC:69807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                               밁
                                                                                                                                                    Š
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                     946
                                                                                                                                                                                                                                                                                                                                            826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
```

```
341 TCACCATCAACCGGACCTACCTCCATCACCATGACCAAAGCATTCCTCTTCTATGGTA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  586 CÁCTGGCCTTGGCTGGAGGACAAAGGTGGATGCTAGCTACCCCATCGTGCTGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     466 AGGTAGTGGTTGAGCTTGGGAAATTTGAAAGGAAGAAGCTTAAAGACTCCAATGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401 CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221 GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               526 ACGGACATAGAGATGTGGAGGGAGAGCCTAAACACCTGGAGCCGTTTCCTGAAAAGGAAG
641 TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                           TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTACCATCAACAGGACCTTCCAGCATCATCCGATGACCAGGGCCTTCCTATTCTACGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCATGAAGAGTCCCCCAAAAACAATTATAAGCTCTTCCATAAACCAGTCATCACCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCATCATGACTGGGCGCTTT
                                                                AAGGCGTGGACGTCCTGAAGTCACTCAGATACCTAGTTCCTTTACAGGCTAAGAACAACC
                                                                                                                         TCAACCATACGGCCACATTCAGCAGGCATTCCCCACTGCCACTGACTACGCAGTACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VQDGHRDVEGEPKHLEFFFEKEALALAGRTKVDAGSYFIVIMMSFLTGETGRLGOCGA
DACFFTINRTFCHHEMTRAFLFYGTDFNIDSLFLFREAHDMALHHEESFKNNYKLFH
KPVITLFHHAATFSRHSHLFLTTGYLLEGVDVLKKLEKLLVPLQAKNNLEKCHAPLVYGV
SDCDFPSDRDSYVRELMAYIEVDSYGECLQNRDLFQQLKNPASMDADAFYRVLAQYKF
ILAFERIAVCDDYITEKFWRFLKLIGVFVFYGSFTIANHESMGVODINQDNYIDSFECMVC
SFIRRLDYDDGLYETYVEWKLIGKISNQFLLTAALNESEMGVODINQDNYIDSFECMVC
RRVWANSRLQGQVSEMKSGGMHGFSLCVVLVFLLMWLFATGLYS"
RRVWANSRLQGQVSEMKSGGMHGFSLCVVLVFLLMWLFATGLYS"
RRVWANSRLQGQVSEMKSGGMHGFSLCVVLVFLLMWLFATGLYS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Glyco_transf_10; Region: Glycosyltransferase family 10 (fucosyltransferase). This family of Fucosyltransferases are the engaged from GDP-Bucose to GloMAc in an alphal, 3 linkage. This family is know as glycosyltransferase family 10" /db_xref="CDD:pfam00852"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="NIH_BMAP_FW0"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="AAH62113.1"
/db_xref="GI:38328411"
/db_xref="LocusID:171167"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         product="fucosyltransferase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="synonym: MGC40819"
/db_xref="LocusID:171167"
/db_xref="MGI:2384748"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               translation="MVRFQRRKLLASCLCVTATVFLMVTLQVVVELGKFERKKLKDSN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 799.6; DB 10
Pred. No. 3.2e-249;
0; Mismatches 209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pyx-ASC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
':
```

340 645

1005

640 945

700

885

460

765

585

525 5

0

13	RESULT	QY 161 ATGGACATACAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGA
1444 TIGAGIGIATGGIGIGCCGCAGGGIGIGGCAAACAGIAGGCIGCAGGAGCAGG 1497	DB	Db 364 AGGTAGTGGTTGAGCTTGGAAATTTGAAAGGAAGAAGCTTAAAGACTCCAATGTGCAAG 423
TIGAGTGTATGGTGTGCACCAAGGTTGTGGCTTATATCAGGCTTCAGGAAAAGG	\$ 5	QY 101 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAAGGAAG
	מם	Query Match 54.7%; Score 799.6; DB 10; Length 2874; Best Local Similarity 81.6%; Pred. No. 3.2e-249; Matches 925; Conservative 0; Mismatches 209; Indels 0; Gaps 0;
1121 CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT 1180	γo	
1061 ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1120	40 40	<pre>from GDP-Fucose to GlcNAc in an alpha1,3 linkage family is know as glycosyltransferase family 10" /db_xref="CDD:pfam00852"</pre>
1001 TETCTCACCCCAGGGAACTGGCAAGTTACATCAGACGGCTGGATTCTGATGACAGATTGT 1060	Db Qy	""""""""""""""""""""""""""""""""""""""
GATCCCCCAGCATCACAGACTGCCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT	9 Q	SDCDF ILAFE SFIRS RRVWA
881 ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG 940	B &	/translation="MVRPORFKILARSCLCVTATYFLMYTLQVVVBLGKTERKKLKDSN VQDGHRDVEGEPKHLEPFPEKEALALAGRIKVDAGSYPIVLMWSPLIGETGRLEGCGA DAGFFINRTEGHHDEFFLFYGTDFNIDSLFLJRREAHHDMALFHEESFKNNYKLHH EFFLFYGTDFNIDSLFLJRREAHHDMALFHEESFKNNYKLHH KPVITLFNHTATFSRHSHLPLTTQYLEGVDVLKSLRYLVPLQAKNNLRQKLAPLYYVQ
821 TTTATAGGATCATTGCXAAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG 880	B &	/product="tucosyltransferase 10" /protein_id="AAH30474.1" /db_xref="G1:20988074" /db_xref="LocusID:171167"
1024 TACAGAACAGAGATCTTCCCCAGCAGCTGAAAAACCCCCGCCTCCATGGATGCTGATGCTT 1083	ДĎ	
761 TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT 820	γ	/db_xref="MGI:2384748"
964 GGGACAGCTATGTCCGGGAGCTGATGGCGTACATTGAAGTTGATTCCTATGGCGAGTGGT 1023	DB Vy	
904 TAAGACAAAAACTGGCCCCATTGGTATATATGTTCAGTCGGACTGCGATCCATCATCAGACA 963	<u>р</u>	/clone_lib="NIH_MGC_94" /lab_host="DH10B" /note="Vector: nCMV_SPORTS"
641 TTAGAAAAAGACTTGGTCGGTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA 700	γQ	68333"
581 AGAGCATTGAAGTCCTGAAGTCACTTCCTATCCTTTGCAGTCCAAAAACAAGC 640	Db Qy	source 128/4 musculus" /organism="Mus musculus" /mol_type="mRNA"
	. ב	
521 TCAACTACACTGCCACGTTCAGCAGGCATTTCCCACTTGCCACTAACTA	P &	This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
461 TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT 520	D 69	Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
664 CTGACTTTAACATAGACAGCTTACCTTTGCCTCGGGAAGCCCCATCATGACTGGGCGCTTT 723	Db	reduced:, rearson, k., Stantripop, S., Thomas, P.J., Touchman, J.W., Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, LH. and Green, E.D.
401 CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT 460	γ	Hansen, N., Ho, SL., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, O.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C.,
341 TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA 400	Qy dd	Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B., Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S., Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
544 GGTCCCCACTGACTGGAGAGACTGGCAGGCTTGGCCAGTGTGGGGCAGATGCTTGCT	Дb	Galinersourg, Maryland; Web site: http://www.nisc.nih.gov/ Contact: nisc mgc@hhgri.nih.gov
281 GGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT 340	QY	DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
221 GATTGACCTTCAACAGGAAAAGGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 280	p, Q	Tissue Procurement: The Cepko Laboratory cDNA Library Preparation: Life Technologies, Inc.
	DЬ	REMARK NIH-MGC Project URL: http://mgc.nci.nih.gov COMMENT Contact: MGC help desk Email: cqapbs-r@mail.nih.gov

```
Ś
                                                    ß
                                                                          Ş
                                                                                                         B
                                                                                                                                   Ś
                                                                                                                                                               B
                                                                                                                                                                                       Ś
                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
144570
                                                                                                                                                                                                                                                                             144270
                                                                                                                                                                                                                                                                                                                                  144210
                                                                                                                                                               144390
                                                                                                                                                                                                                                                                                                                                                             445
                                                                                                                                                                                                                                                                                                                                                                                                                   385
                                                                                                                                                                                                                                                                                                                                                                                                                                             843;
                                                                                                                                                                                                                                                                                                                                                                                                         TTCCTCTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCAT
                                                                                                                         GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
                                                                                                                                                                                 CATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAA 504
                                                                                                                                                                                                                                                                                                                                                                                        TTTCTTCTCCTAGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCAT
ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG
                    ATGGATGCCGATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG 864
                                                                               TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCT
                                                                                                         GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT
                                                                                                                                                              ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG
                                                                                                                                                                                                                                         ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG 624
                                                                                                                                                                                                                                                                                                                               CATGACTGGGCTGTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAA 144269
                                                                                                                                                                                                                                                                                                        CCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="AluSx"
11578 ...11708
/rpt_family="Charlielb"
complement(11733 ...12029)
/rpt_family="AluSp"
complement(12082 ...12251)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="LIMC5"
9998. .10295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="LIMB6"
13613. .13668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="AluSx"
complement(12630. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_fami
12329. .1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="AluSq"
complement(10874. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="AluJb"
complement(9802...9)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="Alusx"
8824. .8899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="Alusx"
8228. .8248
/rpt_family="AT_rich"
complement(8522. .882)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="Charlie1b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (12744. .13041)
/rpt_family="AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="Charlielb"
complement(11276. .1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (9469.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                       57.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family="L1MB6"
[ement(1977)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11/="FRAM"
1269°
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11y="L1MC5"
1127"
                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 838.8; DB 9;
Pred. No. 9.9e-262;
0; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .11577)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8823)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 185872;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                     744
                                                                                                                                                                                                                                                                                                      564
                                                                                                                                                                                                                                                                                                                                                                                                                 444
144629
                                                                               804
                                                                                                         144509
                                                                                                                                                               144449
                                                                                                                                                                                           684
                                                                                                                                                                                                                                                                            144329
                                                                                                                                                                                                                                                                                                                                                                                       144209
                                                                                                                                                                                                                      144389
                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
BC030474
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                      RS Strausberg, R. L., Feingold, E.A., Grouse, I.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsteh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuk, S.S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunarathe, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Boutfard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences

Proc. Nacl., Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             144930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144630
Direct Submission
Submitted (07-MAY-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus (bases 1 to 2874)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BC030474 2874 bp mRNA linear F Mus musculus fucosyltransferase 10, mRNA (cDNA clone TMAGE:5368333), complete cds.
                                                                                                                                                  Strausberg, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BC030474.1 GI:20988073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGAAAAGG 1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTT 144989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC 144929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCGACTTCTGACAGCTCTCAGGGAAACGGGAAATGGGGGAGTGCAAGACGTCAACCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGAT 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGCAGTTTGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTA 144689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGCAGTTTGGGACTACATCACTGAGAAGTTCTGGAGGCCCACTGAAACTGGGGGGTA
                                                                                                                                                                               (bases 1
                                                                                                                                                                            to 2874)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          144999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ROD 06-OCT-2003
ne MGC:40819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             144809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                144749
```

```
AL Submitted (25-0CT-2002) Whitehead Institute/MIT Center for Genome RL Submitted (25-0CT-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA (bases 1 to 185872)

Example 1 to 185872)

Birren, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Charg, J., Choepel, Y., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Crow, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Ferreita, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Mathews, C., McCarthy, M., Mells, C., Landers, T., Levine, R., Milenga, V., Murphy, T., Naylor, J., Neneus, L., Mihova, T., Meneus, C., Micol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, M., Raymond, C., Retta, R., Peterson, K., Phunkhang, P., Pierre, M., Raymond, C., Retta, R., Stojanovic, N., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL Submitted (01-APR-001) Whitehead Institute/WIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA (bases 1 to 185872)

3 (bases 1 to 185872)

Biren, B., Musbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Biren, B., Musbaum, C., Lander, E., Ali, A., Allen, N., Boukhgalter, B., Camarata, J., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Coke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hafez, N., Gord, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Mathews, C., McCarthy, M., Medrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Herre, N., Raymond, C., Retta, R., Peterson, K., Phunkhang, P., Herre, N., Raymond, C., Retta, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Talamas, J., Teefaye, S., Theodore, J., Topham, K., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Pires, Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              liev, I. Johnson, R. Jones, C., Kazatas, A., LaRocque, K.,
Lamazares, R., Landeres, T., Lehoczky, J., Levine, R., Liu, G.,
MacLean, C., Macdonald, P., Marquis, N., Matthews, C., McCarthy, M.,
McEwan, P., McKernan, K., McPheeters, R., Meldrin, J., Meneus, L.,
Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Norbu, C.,
Morman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J.,
Petersen, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C.,
Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J.,
Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seeman, S.,
Severy, P., Sougnez, C., Spencer, B., Stange-Thomann, N.,
Severy, P., Sougnez, C., Spencer, B., Stange-Thomann, S.,
Severy, P., Sougnez, C., Spencer, B., Stange-Thomann, S.,
Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S.,
Theodore, J., Travers, M., Travis, N., Trigilio, J., Vassilev, H.,
Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G.,
Direct Submission
                                                                                                                                                      Submitted (05-NOV-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA on Nov 5, 2002 this sequence version replaced gi:24371492. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Diaz,J.S., Dodge,S., Faro,S., Ferreira,P., FitzHugh,W., Gage,D.,
Galagan,J., Gardyna,S., Ginde,S., Goyette,M., Graham,L.,
Grand-Pierre,N., Hagos,B., Heaford,A., Horton,L., Hulme,W.,
                                                                                             http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Collins,S.,
Center: Whitehead Institute/ MIT Center for Genome Research Center code: WIBR Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Collymore, A., Cooke, P., DeArellano, K., Dewar, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                            repeat_region
                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
   repeat_region
                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center project name: L13069
Center clone name: 359_B_20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="AluSx"
complement(7840. .8)
                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (5071. .5198)
/rpt_family="FLAM_C"
complement (5190. .5297)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="AluJo"
complement(2063. .2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="(A)n"
561. .812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (253.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(1. .273)
/rpt_family="MER50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (813.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="RP11-359B20"
/clone lib="RPCI-11 Human Male BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (1694.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'rpt_family="MER50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="Alusq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpt_family="(TAAAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpt_family="L1MC4a"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db_xref="taxon:9606"
chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .185872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      t_famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          t_family="L2"
                                                                                                                                                                                                                                                                                                                                                 _family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="L1MC5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="LIMC4a"
                                                                                                                                                                                                                      _family="AluJb"
                                                                                                                                                                                                                                                                                         _family="AluSc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family="Alusc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="L1MC5"
                                                                  family="AluSg"
ement(7500
                                                                                                                                                                family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                 _family="AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="FLAM_C"
lement(1132. .1628)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family="(T)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family="MLT2B2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .3636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Y="FLAM_C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1981)
                .8149)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .2368)
```

REFERENCE AUTHORS

TITLE JOURNAL REFERENCE

TITLE JOURNAL

COMMENT

TITLE JOURNAL

```
뮍
                                                         Ś
                                                                                                                               В
                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 99.2
Matches 843; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
70187 TTTCTTCTCCTAGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCAT 70128
                                                                                                                                                                 385 TTCCTCTTCTATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCAT 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="(CAAAAA)n"
complement(9080. 9150)
/rpt_family="MITIK"
complement(10454. 10537)
/rpt_family="MIZ"
10538. 10843
/rpt_family="BluSg"
complement(10844. 10894)
/rpt_family="10843. 10894)
/rpt_family="10843. 10894)
/rpt_family="10844. 10894)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="MIR"
6708. 6797
/rpt_family="L2"
complement(6992. 6955)
/rpt_family="L2"
complement(7144. ..7447)
/rpt_family="AluJo"
7745. ..7854
/rpt_family="MIUO"
7745. ..7854
/rpt_family="MIR"
7854
/rpt_family="MIR"
complement(7907. ..7982)
/rpt_family="MIR"
8737. 8773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (984..1374)
/rpt_family="MLTIF"
complement (1401..1576)
/rpt_family="MLTIF int"
complement (1940..2100)
/rpt_family="MLTIH1"
2161..2427
/rpt_family="L2"
complement (4278..4692)
/rpt_family="MLTIJ1"
4818..4937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /pt_family="AluSx"
12903 . 12923 . 12923 . 12923 . 12923 . 12923 . 12923 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 12924 . 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="MIR"
11247. .11379
/rpt_family="L2"
11391. .11425
                                                                                                                                                                                                                                                                                                                                                                                 complement(14533..14599)
/rpt_family="MER5A"
complement(14600..14891)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt family="AluJo"
complement (12038. .12350)
/rpt family="AluY"
12351. .12539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="L2"
4941. .5075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="(GGA)n"
|2578..12889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AluJo"
12540. .12559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt_family="AluSq"
11916. .12037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="AT_rich"
[1434. .11721
                                                                                                                                                                                                                                              57.4%; Score 838.8; DB 9; Length 104120; 99.2%; Pred. No. 9e-262; tive 0; Mismatches 7; Indels 0; Gaps
                                                                                                                                                                                                                                                        0
```

	y d	8 8	g g	g Q	Db Qy	Db Qq	g Q	B 8	B 8	B 8	B 8	p Q	dg Qy
LT 11 1144 S S SION Homo sapiens chro SSION AC091144 AC091144.12 GI:2 ORDS HTG. CB Homo sapiens (hum CB Homo sapiens Eukaryota; Metazo Mammalia; Eutheri 1 (bases 1 to 18 ETHORS Birren,B., Nusbau UTLE Homo sapiens chro UNNAL Unpublished UNNAL Unpublished EENCE 2 (bases 1 to 18 Birren,B., Linton Barna,N., Bastien Camarata,J., Camp	1225 CAGGAAAAGG 1234 69347 CAGGAAAAGG 69338	1165 AATTACATCGATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTT 1224 	1105 CAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGAC 1164 	1045 TCTGATGACAGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAAC 1104 	985 ATTCTTGTATCAGAATTTTCTCACCCCAGGAACTGGCAAGTTACATCAGACGACTGGAT 1044 	925 GTCCCTGTATATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCT 984 	865 AAIGCAGITTGTGATGACTACAICACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTA 924 	805 ATGGATGCCGATGGCTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAG 864 	745 TCCTATGGTGAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAAATCCAGCCTCT 804 	685 GACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGAT 744	625 CAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTA	565 ACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTG 624 	505 CCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTA 564

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
AC067838/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ERSION
                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                  Direct Submission

Birect Submission

Submitted (27-APR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 0214, USA

CE 3 (bases 1 to 104120)

Barra,N., Bassien,V., Bloom,T., Boguslavkiy,L., Boukhgalter,B., Camarata,J., Chang,J., Chazaro,B., Choepel,Y., Collymore,A., Cock,P., Debarellano,K., Dewar,K., Diaz,J.S., Dodge,S., Farreira,P., FitzGerald,M., Gag,D., Galagan,J., Gardyna,S., Gord,S., Graham,L., Grand-Pierre,N., Hagos,B., Gardyna,S., Gord,S., Landers,T., Levine,R., Lindblad-Toh,K., Karatas,A., Kells,C., Landers,T., Levine,R., Lindblad-Toh,K., Liu,G., MacLean,C., Macdonald,P., Major,J., Matthews,C., Kanat,A., Kells,C., Landers,T., Levine,R., Lindblad-Toh,K., Liu,G., MacLean,C., Macdonald,P., Major,J., Matthews,C., Murphy,T., Naylor,J., Meneus,L., Mihova,T., Mlenga,V., McCarthy,M., Meldrim,J., Meneus,L., Mihova,T., Mlenga,V., McCarthy,M., Schauer,S., Schuback,R., Seaman,S., Severy,P., Roman,J., Roy,A., Schauer,S., Schuback,R., Seaman,S., Severy,P., Smith,C., Spencer,B., Stange-Thomann,N., Stojanovic,N., Talamas,J., Tesfaye,S., Theodore,J., Topham,K., Travers,M., Vassiliev,H., Viel,R., Vo,A., Milson,M., Wi,X., Wyman,D., Young,G., Zainoun,J., Zembek,L., Zimmer,A., and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dodge'S. Domino, M., Doyle, M., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Tilev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., NcCarthy, M., McEwan, P., McGurk, A., McRernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Olivar, T.M., Oliver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Pisani, C., Santos, R., Schauer, S., Severy, P., Spener, B., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigillo, J., Vassillev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1349
             Direct Submission
Submitted (10-OCT-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
4 (bases 1 to 104120)
Birren,B., Nusbaum,C., Lander,E., Ali,A., Allen,N., Anderson,S., Bastien,V., Bloom,T., Boguslavkiy,L., Boukhgalter,B., Camarata,J., Chang,J., Chazaro,B., Choepel,Y., Collymore,A., Cook,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S., Faro,S., Ferreira,P., FitzGerald,M., Gage,D., Galagan,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N., Anderson,S., Baldwin,J., Barna,N., Bastien,V., Beda,F., Boguslavkiy,L., Boukhgalter,B., Brown,A., Burkett,G., Campopiano,A., Castle,A., Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC067838

104120 bp DNA linear PRI 21-MAR-2003 Homo sapiens chromosome 8, clone RP11-722E23, complete sequence. AC067838
AC067838.18 GI:29135646
HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Birren, B., Nusbaum, C. and Lander, E. Homo sapiens chromosome 8, clone RP11-722E23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; Pr
1 (bases 1 to 104120)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTCAACTCAAGAGTTTTGGGCCCCTAGTATTCAAGGACTAA 1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                        Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to 104120)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                               repeat_region
                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center project name: L9405
Center clone name: 722_E_23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: WIBR
/rpt_fam11y= ___
complement(865. .923)
/rpt_family="MLT1F"
                                                                                                                     complement (323
                                                                                                                                                    1dz/
                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                    clone
                                                                                                                                                                                                                                                         clone="RP11-722E23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .104120
                                                            family="L2"
ement /or-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://www-seq.wi.mit.edu
                                                                                                                                                       family="(TA)n"
```

```
Boguslavkiy, I., Boukhgalter, B., Camarata, J., Choepel, Y.,
Collymore, A., Cooke, P., Coorum, B., DeArellano, K.,
Diaz, J. S., Dodge, S., Dooley, K., Dorris, L., Erickson, J., Faro, S.,
Ferreita, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S.,
Graham, L., Grand-Pierre, N., Hafez, N., Hagopian, D., Hagos, B.,
Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C.,
Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R.,
Lindblad-Toh, K., Liu, G., Lui, A., Mabbitt, R., MacLean, C.,
Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M.,
Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Muzphy, T., Naylor, J.,
Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P.,
O'Neil, D., Oliver, J., Peterson, K., Phukhang, P., Fierre, N.,
O'Neil, D., Oliver, J., Peterson, K., Phukhang, P., Rise, C., Rogov, P.,
Rachupka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P.,
Roman, J., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C.,
Spencer, B., Stange-Thomann, N., Stojanovico, N., Stubbs, M.,
Vassillev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X.,
Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gardyna,S., Gord,S., Graham,L., Grand-Pierre,N., Hafez,N.,
Hagos,B., Horton,L., Hulme,W., Iliev,I., Johnson,R., Jones,C.,
Kamat,A., Karatas,A., Kells,C., Landers,T., Levine,R.,
Lindbladd-Toh,K., Liu,G., MacLean,C., Macdonald,P., Major,J.,
Matthews,C., McCarthy,M., Meldrim,J., Meneus,L., Mihova,T.,
Mlenga,V., Murphy,T., Naylor,J., Nguyen,C., Nicol,R., Norbu,C.,
Norman,C.H., O'Connor,T., O'Donnell,P., O'Neil,D., Oliver,J.,
Peterson,K., Phunkhang,P., Pierre,N., Raymond,C., Retta,R.,
Peterson,K., Rogov,P., Roman,J., Roy,A., Schuer,S., Schupback,R.,
Seaman,S., Severy,P., Smith,C., Spencer,B., Stange-Thomann,N.,
Stojanovic,N., Talamas,J., Tesfaye,S., Theodore,J., Tophan,K.,
Travers,M., Vassiliev,H., Viel,R., Vo,A., Wilson,B., Wu,X.,
Wyman,D., Young,G., Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (21-MAR-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 21, 2003 this sequence version replaced gi:24496795. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone is completely overlapped by number AC09114 [WICGR project L13069] and AC104027 [WICGR project L21993].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 (bases 1 to 104120)
Birren,B., Nusbaum,C., Lander,E., Abouelleil,A., Allen,N.,
Anderson,S., Arachchi,H.M., Barna,N., Bastien,V., Bloom,T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (03-NOV-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Only the first 104.1 kilobases of the middle contig is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: sequence submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
_lib="RPCI-11 Human Male BAC"
```

	QY 221 GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 280	QY 161 ATGGACATACAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGA	QY 101 AGGTCATGGTTGAGCTGGGGAAAGTTTGAAAGGAAGGAAG	Query Match G9.4%; Score 1013.8; DB 4; Length 1389; Best Local Similarity 84.6%; Pred. No. 0; Matches 1151; Conservative 0; Mismatches 207; Indels 3; Gaps 1;	IEWKLKGEISNQRLLTALRERKWGVQDVXQDNYIDAFECMVCTKVWDNIRLQEKGLPP KRWQADVTHLSCPEPTVFAFSPLVPRRRSLREMWIPSFQQSKKEARALRWLVDRNQNF CRIGIN	TXAFLEYGTDFSIDSLFHEARAHHDMALEHBESEVANYĀLFHQVITLENYTATFSRH YATLYGDLOGAUDGLAGTENALSXARHHDMALGHEALSXAHHZAGNGDCDFPSDRYDSYVAGS WITVIGGECLAWEDDENALSXARHHDMALGFFRILAGYKGILAGUGDGGLAGUGDGGLAGUGDGGLAGUGDGGLAGUGDGGLAGUGDGGGGGGGGGG	D E	CDS 11389 /gene="fut10" /codon_start=1 /product="putative alpha 1,3-fucosyltransferase"	/mol_type="mRNA" /db_xref="taxon:9913" gene 1.	FEATURES Location/Qualifiers source 11389 /organism="Bos taurus"	AUTHORS Germot,A. TITLE Direct Submission JOURNAL Submitted (17-JUL-2003) EA 3176 Glycobiologie et Biotechnologie, Faculte des Sciences et Techniques, 123, Avenue A. Thomas, Limoges 87060. France	Genomic organization and expression profile of putati 1,3-fucosyltransferase genes, fut10 and fut11, in Bos Unpublished 2 (bases 1 to 1389)	a; Pec Maftah	(cow) Metazoa;	ucosyltransferase (fu	RESULT 9 AY344579 1389 bp mRNA linear MAM 03-AUG-2003	Qy 1203 GGTGTGGGCTAATATCAGGCTTCAGGAAAAGG 1234
QY 1361 TTGAACAATCCAAGAAGGACCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT	Db . 1232 CTTTCTACCCCTGGTCCCACGTCGGCGCTCTTTGCGAGAGATGTGGATTTCCAGC	1172	1112	1052		Qy 1001 TITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT	Qy 941 GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT	QY 881 ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG	Qy 821 TITATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG	Db 692 TGCGAAACAAGCCTCTCCACAGTTGAGCAACCCGGCCTCGATGGACGCCGATGGCT	701 632 761	Qy 641 TIAGAAAAAGACTIGCICCGCTGGTGTACAGTCAGACTGTGACCCCACCATCAGACA	OY 581 AGAGCATIGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC	QY 521 TCAACTACACTGCCACGTTCAGCAGGCATTCCCACTTGCCACTAACTA	Qy 461 TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATGAAACCAGTGATTACCTTGT	Qy 401 CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT	OY 341 TCACCATCAACCGGACCTACCTCCCATCATGACCAAAGCATTCCTCTTCTATGGTA
SGTGGCTGGTTGATAGGAATCAAAACT 1420 SGTGGCTGGTCGATAGGAATCAAAACT 1348	TTTGCGAGAGATGTGGATTTCCAGCT 1360 	ı ω—	ب در م			ACGACTGGATTCTGATGACAGATTGT 1060	CAAAAGTGCTATTCTTGTATCAGAAT 1000 	ACTGGGGGTAGTCCCTGTATATTACG 940	AGCTTTTGAGAATGCAGTTTGTGATG 880	7 (CGAGGTCGATICCTATGGTGAATGTT 760	GTCAGACTGTGACCCACCATCAGACA 700 	AGTTCCTTTGCAGTCCAAAAACAAGC 640 	CTTGCCACTAACTACCCAATACTTGG 580	CTTTCATAAACCAGTGATTACCTTGT 520	GAPAGCCCATCATGACTGGGCTGTTT 460 	GACCAAAGCATTCCTCTTCTATGGTA 400

Query Match 74.2%; Score 1084.4; DB 9; Length 1651; Cy Best Local Similarity 96.7%; Pred. No. 0; Db Matches 1133; Conservative 0; Mismatches 1; Indels 38; Gaps 1; Db Matches 1133; Conservative 0; Mismatches 1; Indels 38; Gaps 1; Cy 101 AGGTCATGGTTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTTCCAGTTTGCAAG 160 Cy Db Db	ADGOMEVRRYMSRCLFLHQPDLFPSSHD PLPRKAHDMAVFHEES PKINYKLFHKPVI KSLRYLVFLQSKNKLRKRLAPLYVQSDCD CDLPQQLKNPASMDADGFYRIIAQYKFILAF PSITDWLPSNKSAILVSEFSHPRELASYIR PALRERKMGVQDVNQDNYIDAFECNVCTKVM		variant, lacks the	/mol type="maNA"	COMMENT related sequences: AJ512465, AJ555838. FEATURES Location/Qualifiers Source 1.1651 Db	AUTHORS Oriol, R. TITLE Direct Submission JOURNAL Submitted (27-DEC-2002) Oriol R., U504, INSERM, 16 Avenue Paul JOURNAL Vaillatt-Conturier, 94807, Villeinif, FRANCE Db	AUTHORS Candeller, J. J., Martinez-Duncker, L., Orloi, K. and Mollicone, K. TITLE Cloning expression and genomic organization of two new human Qy alpha3-fucosyltransferases (FUT10 and FUT11) JOURNAL Unpublished DEFERENCE 2 (ASSAULT ASSAULT ASS	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	AJ535 alpha Homo	4	SOLT 8	Qy 1181 TTGAGTGTATGGTGTGCACCAACGTGTGGGCTAATATCAGGCTTCAGGAAAAGG 1234	QY 1121 CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT 1180	OY 1061 ATGAGGCCTATGTAGAATGGAAGGTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1120	Db 1324 TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1383
1083 GC. IGANGAG ICA MARA LICAMACCANG LICAMACCANG LICAMACCANG CONTRACTORMALISM CONTRACTORMALISM CONTRACTORMALISM CONTRACTORMACCANG LICAMACCANG CONTRACTORMACCANG CONTRACTORMAC	963 GCTTCCAAGTACAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTGGC	943 IAMGITIAI CLAGITII GEMANTI GEMAGITI GEMINALI GEMAGITI GEMINALI	783 GCAGCTGAAAATCCAGCCTCTATGGATGCCGATGCCTTTTATAGGATCATTGCACAGTA	y 723 GATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAGACCTCCCTC	y 663 GGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAGCT 722	954	9 543 CAGGCATTCCCACTTGCCACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAGTC 602	y 483 CAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTCAG 542	Y 423 ACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAAAA 482	NY 395 422	Qy 341 TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCT 394	OY 281 GGTCCCCGCTGACGGGGAGATCGGAAGGCCAATGTGGAGCAGATGCTTGTTTCT 340	221 GATTGACCTICAACAGGAAAAGAAAATIGGAAATIGGACAGCTACCCCATTATGCTCTGGT 5 534 GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT 5	101 ALGORAFIA CHARAI GENERAL CENCERTE LIBERT CALLETTE CONTROLLED C	161

ω

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
HSA512465
LOCUS
                                                                                                                                                                                                                                                                                                                                                    COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                    CDS
                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      934
                                                                                                                                                                                                                                                                                                                                  Direct Submission
Direct Submission
Submitted (16-OCT-2002) Oriol R., U504, INSERM, 16
Vaillant-Couturier, 94807 Villejuif, FRANCE
related sequences: AJ535839, AJ535839.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AJ512465.1 GI:24370972
alpha 1,3-fucosyl transferase; FUT10
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Candelier,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AJ512465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSA512465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G 1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGAATTITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGAC 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTGATGACTACATCACTGAGAAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACAGCTCTCAGGGAAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATC 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTT 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTACGGATCCCCCAGCATCACAGACTGGCTTCCCAAGTAACAAAAGTGCTATTCTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTA 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGATTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12465 mRNA for putative alpha 1,3-fucosyl transferase
/product="putative alpha 1,3-fucosyl transferase"
/protein id="CAD54669.1"
/db_xref="GO1:433"0973"
/db_xref="GOA:Q8IVJ3"
/db_xref="GOA:Q8IVJ3"
/db_xref="SPTREMBL:Q8IVJ3"
/db_xref="SPTREMBL:Q8IVJ3"
/db_xref="SPTREMBL:Q8IVJ3"
                                                                                                                 /gene="FUT10"
/codon_start=1
/evidence=experimental
                                                                                                                                                                    /gene="FUT10"
345. .1604
                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       È,
                                                                                                                                                                                                                  dev_stage="40 to
country="France"
                                                                                                                                                                                                                                                   map="8p11.23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genomic
                                                                                                                                                                                                      .1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1623)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Martinez-Duncker,I., Oriol,R. and Mollicone,R. omic organization of a new alpha3-fucosyltransferase
                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                   day
                                                                                                                                                                                                                                     embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                     A۷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRI 02-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                     Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1606
```

```
DACEFTINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFH
KPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQ
SDCDPPSDRBSYVRELMTYIEVDSYCECLRNKDLPQQLKNPASMDADGFYRIIAQYKF
ILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDMLPSNKSAILVSEFSHPRELA
SYIRRLDSDRLYBAYVFWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFECMVC
TKVMANIRLQEKVSKSKVGIEPAGWPS"
```

ORIGIN

8 8 맑 8 밁 Š 밁 Ś 片 Ś 片 Š 皮 8 멂 Ş 밁 Ś 밁 Ş 문 Š 밁 Ś Ş 밁 S 밁 밁 S 맑 Query Match
Best Local Similarity
Matches 1133; Conser 1204 1144 1084 1024 821 761 701 964 641 904 581 844 521 784 461 724 401 664 341 604 281 544 221 484 161 424 101 GATCCCCCAGCATCACAGACTGGCTTCCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTTGTGATG TACGAAACAAAGACCTCCCTCAGCAGCTGAAAATCCAGCCTCTATGGATGCCGATGGCT GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGC TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT TCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTATGGTA TCACCATCAACCGGACCTACCTCCATCACATGACCAAAGCATTCCTCTTTCTATGGTA GGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT GGTCCCCGCTGACGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGGAGGATGCTTGTTTCT GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAGGAGTTTAAAAAGTTCCAGTTTGCAAG AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGTTTTAAAAGTTTCCAGTTTTGCAAG TACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCT CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTT TITCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1060 GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT 1323 TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACA TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT Conservative 77.5%; 0, Score 1132.4; Pred. No. 0; 0; Mismatches BB 1; 9; Indels Length 1623; , , Gaps 1000 1263 940 880 1143 760 580 1203 1083 1023 520 460 483 700 963 640 903 843 783 723 400 663 340 603 220 0

```
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
HSA535838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                    FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                JOURNAL
                                                                                                                                                                                                                      TITLE
                                             gene
                       Sgo
                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1357
                                                                                                                                                                                                                                                                                                                                                                                                                                 1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      997
                                                                                                   Direct Submission
Submitted (27-DEC-2002) Oriol R., U504, INSER
Vaillant-Couturier, 94807, Villejuif, FRANCE
related sequences: AJ512465, AJ535839.
Location/Qualifiers
                                                                                                                                                                                                         Candelier, J.J., Martinez-Duncker, I., Oriol, R. and Mollicone, R. Cloning expression and genomic organization of two new human alpha3-fucosyltransferases (FUT10 and FUT11)
                                                                                                                                                                                                                                                                                                                                            HSA535838 1673 bp
Homo sapiens mRNA for putative a
gene), splice variant 1.
                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                       Oriol, R.
                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                         alpha3-fucosyltransferase; alternative
                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                    AJ535838.1 GI:27475656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTTTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGA 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTTTTCATCTCAAGAGTTTTTGGGGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGCTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCATTTGAGTGTATGGTGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGTATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAATTTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGGATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTTTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCCAGAGCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTACCACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCCAGAGCCCCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAGCTGTCAGGGAACGGAAATGGGGAGATGCAAGACGTCAACCAGGACAATTACATCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAGCTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIGIATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACGGATCCCCCAGCATCACAGAGCTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCA
                                                                                                                                                                                   (bases 1 to 1673)
479. .1654
/gene="FUT10"
/function="adds i
                      /gene="FUT10"
479. .1654
                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                   organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCC
                                                                                                                                                                                                                                                       Chordata;
Primates;
fucose via alpha 1-3 linkage
                                                                                                                                                                                                                                                         Craniata; Vertebrata; E
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                       o mRNA linear PRI 01-FEB-2003
alpha3-fucosyltransferase (FUT10
                                                                                                                                                                                                                                                                                                       splicing;
                                                                                                                                              INSERM, 16 Avenue
                                                                                                                                                                                                                                                                                                          FUT10
                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                          Homo
 ď
                                                                                                                                                                                                                                                                                                         gene
 GlcNAc"
                                                                                                                                                Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     996
                닭
                                          Ş
                                                                      밁
                                                                                        δ
                                                                                                                    밁
                                                                                                                                          5
                                                                                                                                                                    맑
                                                                                                                                                                                        δ
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 1136; Conserv
                                                                        1127
                                                                                                                       1067
                                                                                                                                                                       1007
                                                                                              754
                                                                                                                                                694
                                                                                                                                                                                             634
                                                                                                                                                                                                                      947
                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                      887
                                                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                                      827
                                                                                                                                                                                                                                                                                                                                                                                           394
                                                                                                                                                                                                                                                                                                                                                                                                                                           334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   647
                                                                                                                                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                   767
                                                                                                                                                                                                                                                                                                                                                                                                                   707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
 TGTGATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTA
```

```
/note="splice variant 1, lacks the transmembrane domain"
/codon_start=1
/product="putattive alpha3-fucosyltransferase"
/protein_id="CAD59771.1"
/protein_id="CAD59771.1"
/db_xref="GI:27475657"
/db_xref="GI:27475657"
/db_xref="GAD59781V17"
/db_xref="GAD5981V17"
/db_
DB
9
Length 1673;
```

Conservative 77.5%; 0; Score 1133; D Pred. No. 0; 0; Mismatches 5 Indels 0 Gaps

GATGGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTT GAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCC 1186 GAATGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCC TCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGT TCAGACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGT AACAAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCA TACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAA TACTTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAA GCTGTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATC GCTGTTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATT TATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGG TGTTTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTC TGTTTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTC CTCTGGTGGTCCCCGCTGACGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCT CTCTGGTGGTCCCCGCTGACGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCT AAAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATG ANAGAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATG TTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAG 213 TATGGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGG TTGCAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAG 873 513 1246 1126 753 1066 1006 633 946 886 393 826 453 766 706 333 646 273 586 526

933

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
HSA431184
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                    CDS
                                                                                   5'UTR
                                                                                                                    gene
                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2675 l
Homo sapiens partial mRNA for
transferase (TUT10 gene)
Au431184
                                                                                                                                                                                                                                                                                                                                                                                                                               Roos,C., Kolmer,M., Mattila,P. and Renkonen,R. Composition of Drosophila melanogaster proteome fucosylared glycan metabolism
J. Biol. Chem. 277 (5), 3168-3175 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AJ431184.1 GI:18996309
FUT10 gene; putative alpha 1,3-fucosyl transferase.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (15-FEB-2002) Roos C., Bioir
Haartmansg. 8, FIN-0020 Helsingfors,
                                                                                                                                                                                                                                                                                                                                                                 Roos,
                                                                                                                                                                                                                                                                                                                                                                                                                  21671316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                              11698403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAAGATGTGGAATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCCAGAGGCCCACAGTGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCĀT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTCATCTCAAGAGTTTTGGGGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGAACAATCCAAGAAAGAAGCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTCTCACCACTCCGGACTCCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCCAAAAGATGGGAGGCAGAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIGAGIGIAIGGIGIGCACCAAGGIGIGGGCIAAIAICAGGCIICAGGAAAAGGGCIIAC 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGAGGCCTATGTAGAATGGAAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAG 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGT 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTCATCTCAAGAGTTTTGGGGGCCTAGTATTCAAGGACTGA 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGAACAATCCAAGAAAGCCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGAGTGTATGGTGCACCAAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCTCAGGGAACGGAAATGGGGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCAT
                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 2675)
                                                                                                                                                                                                                                                                            1. .2675
                                                                                                                                /cell type="neuroblastoma"
/tissue type="brain"
/clone_Tib="LTI_NFL001_NBC4"
                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODD001YG24"
/gene="FUT10"
/codon_start=1
/product="putative alpha 1,3-fucosyl transferase"
                                                                                                gene="FUT10"
                                                                                                                                                                                                                                                                                           location/Qualifiers
                                                  'gene="FUT10"
322. .1608
                                                                                                                                                                                         'sex="male"
                                                                                                                  .2675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp mRNA linear PRI
putative alpha 1,3-fucosyl
                                                                                                                                                                                                                                                                                                                               Bioinformatics, MediCel
                                                                                                                                                                                                                                                                                                                FINLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     involved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-FEB-2002
                                                                                                                                                                                                                                                                                                                                 . 1td,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1120
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                   Ş
                                                                                                     맒
                                                                                                                                      Š
                                                                                                                                                                          밁
                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 1359; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                                                                                                                 577
                                                                                                                                                                                                                                                                                                                                                                                    664
                                                                                                                                                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    157
         877
                                                                                                           904
                                                                                                                                         757
                                                                                                                                                                            844
                                                                                                                                                                                                             697
                                                                                                                                                                                                                                               784
                                                                                                                                                                                                                                                                              637
                                                                                                                                                                                                                                                                                                                724
                                                                                                                                                                                                                                                                                                                                                                                                                  517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGGATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATCTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                        TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                    GTTTTTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTTTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCTTCACCATCAACCGGACCTACCTCCATCATCACATGACCAAAGCATTCCTCTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGTGGTCCCCGCTGACGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGTGGTCCCCGGTGACGGGGGAGACTGGGGAGGTTAGGCCCAATGTGGGAGCAGATGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAGATGGACATACAAAAATGGAGGAAGCACCTACGCATTTTAATTCATTTCTTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                                                                                                                                                        AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                                                                                                                                                                                                                                                                                                TTGGAGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTACTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCT
     GATGACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCTGTATAT 936
                                                          GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT 876
                                                                                                           TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                  TGTTTACGAAACAAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGAT
                                                                                                                                                                            GACAGGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAA
                                                                                                                                                                                                                                             AAGCTTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCA
                                       GGCTTTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGT 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /protein_id="CAD24023.1"

/db_xref="G1:18956310"

/db_xref="GOx:08TE43"

/db_xref="SPTREMBL:08TE43"

/db_xref="SPTREMBL:08TE43"

/translation="meeraptherprefixer:pygTDFNIDSLIPERAHHUMAVFHEESPK
RLGQCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLIPERKAHHUMAVFHEESPK
NNYKLFHKFVITLENVTATFSRHSHLFLTTQYLSFIEVLKSLRYLVPLQSKNKLRKRL
APLVYVQSDCDBFSDRSYXFELMTYLEVDSYGSCTERNDLPQQLKPASMDADGFYR
IIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDMLPSNKSAILVSEF
SHPRELASYIRRLDSDBRLYSEAVEWKLKGEISNGRLLTAVREEXMGVQDVNQDNYID
APECNVCTXVMAIRLQEKGLEPKRWEADTHLSCPEFTVFAFSPLRTPPLSSLREMW
ISSFEGSKEAQALRWLVDRNQNFSQEFWGLVFKD"

1509. .>2675

1609. .>2675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1355.4;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٠.
و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                             816
                                                                                                                                                                                                                                                                                                                                                       636
                                                                                                                                                                                                                                                                                                                                                                                                                        576
                                                                                                                                                                                                                                                                                   696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                903
                                                                                                                                                                                                                  756
                                                                                                                                                                                                                                                   843
                                                                                                                                                                                                                                                                                                                                                                                                                                                          663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          156
                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                         723
                                                                                                              963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

S

Ś 밁

B

밁 Š

5

Ś

В

Ş g Š

g

0;

```
RESULT 4
HSA582018
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ŕ
                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ą
                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                Sg
                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                   Vailla:
Splice
                                                                                                                                                                                                                                                                                                                                                                                             Submitted (03-SEP-2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Martinez-Duncker,I., Candelier,J.J., Oriol,R. Cloning, expression and genomic organization cliphas-fucosyltransferases (FUT10 and FUT11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSA582015 mRNA for alpha3-fucosyltransferase (FUT10 AJ582015 GI:34481985 alpha3-fucosyltransferase; FUT10 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                          Oriol, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCACCTTTGAGCTCTTTGCGAGAGATGTGGATTTCCAGCTTTGAACAATCCAAGAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAGATACCCACCTGAGTTGCCCCAGAGCCCACAGTGTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAAGGGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCCTAGTATTCAAGGACTGA 1836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGTGCAAGACGAGGACAATTACATCGACGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 2312)
                                                                                                                                                                                                                                                                                                                                                                                                          Submission
 /translation="MVRIQRKLLASCLCVTATVFLLVTLQVMVELGKFERKEFKSS LQDGHTXMEBAPTLLNTLQRKKLASCLCVTATVFLLVTLQVMVELGKFERKEFKSS LQDGHTXMEBAPTLLNTLASFLKREGLTFNRKRKJELPLPRKAHIDMAVFHEESPKNLVKLFH KPVITLFNYTATFSRHSTLLFLTYQYLESIEVLKSLRYLVPLQSKWKLKRELAFLVYVQ BODPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKVBASMDAGGYRIIAQYKF ILAGYKF SCHEMAVCDDYITEKFWRPLKLGVVPVYGSPSITDNLPSNKASLLVUSFSHPRELA SYIRRLDSDRRYFELAYVENPLASSFERFKFLKGVPVYGSPSITDNLPSNKASLLVUSFSHPRELA SYIRRLDSDRRYFEAYVENPLASSFERFKFLKGVPVYGSPSITDNLPSNKASLLVUSFSHPRELA SYIRRLDSDRRYFEAYVENPLASSFERFKEFKSSFERFKEFKSS
                                                                                                                                                                                                              /gene="FUT10"
                                                                                                         /evidence=experimental
/product="alpha3-fucosyltransferase"
/protein_id="CAE46499.1"
/db_xref="GI:34481986"
                                                                                                                                                                       codon_start=1 •
                                                                                                                                                                                 gene="FUT10"
function="adds"
                                                                                                                                                                                                                                                                                            organism="Homo sapiens"
(mol_type="mRNA"
(db_xref="taxon:9606"
                                                                                                                                                                                                                                                       map="8p11.23"
clone="479"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                  fucose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                           U504, Inserm,
                                                                                                                                                                                  alpha3-linkage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of two ner.
                                                                                                                                                                                                                                                                                                                                                                   AJ431184.
                                                                                                                                                                                                                                                                                                                                                                                             16 Av. Paul
                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              new human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI 04-SEP-2003
                                                                                                                                                                                  GlcNAc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1200
                                          밁
                                                                δ
                Ş
                                                                                               뮍
                                                                                                                      δ
                                                                                                                                                    В
                                                                                                                                                                          5
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   岁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Sim
Matches 1360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polyA_signal
                1001
                                          1276
                                                                                                1216
                                                                                                                                                                                                           1096
                                                                                                                                                                                                                                                                  1036
                                                                                                                           881
                                                                                                                                                                                821
                                                                                                                                                                                                                                       761
                                                                                                                                                                                                                                                                                            701
                                                                                                                                                                                                                                                                                                                        976
                                                                                                                                                                                                                                                                                                                                                  641
                                                                                                                                                                                                                                                                                                                                                                              916
                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                                         581
                                                                                                                                                                                                                                                                                                                                                                                                                                     956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           436 AGGTCATGGTTGAGCTGGGGAAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 99.9
60; Conservative
TTTCTCACCCCAGGGAACTGGCAAGTTACATCAGACGGACTGGATTCTGATGACAGATTGT
                                                       GATCCCCCAGCATCACAGACTGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAAT
                                                                                                                                                                                                                             TACGAAACAAGACCTCCCTCAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGCCT
                                                                                                                                                                                                                                                                               GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                               ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGTAGTCCCTGTATATTACG
                                                                                                               ACTACATCACTGAGAAGTTCTGGAGGCCACTGAAACTGGGGGGTAGTCCCCTGTATATTACG
                                                                                                                                                    TTTATAGGATCATTGCACAGTATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                        TTTATAGGATCATTGCACAGTATAAGTTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATG
                                                                                                                                                                                                                                                                GGGACAGCTATGTTCGCGAGCTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTT
                                                                                                                                                                                                                                                                                                                     TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                        TTAGAAAAAGACTTGCTCCGCTGGTGTATGTACAGTCAGACTGTGACCCCACCACCATCAGACA
                                                                                                                                                                                                                                                                                                                                                                             AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                           AGAGCATTGAAGTCCTGAAGTCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCATGAAGAGTCCCCGAAAAAACAATTATAAGCTCTTTCATAAACCAGTGATCACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCATGAAGAGTCCCCGAAAAACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTCTTATGGTA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATTGACCTTCAACAGGAAAAGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGACTTTAACATAGATAGCTTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCACCATCAACCGGACCTACCTCCATCATCACCATGACCAAAGCATTCCTCTTCTATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTCCCCGCTGACGGGGGGAGACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTCCCCGCTGACGGGGGAGACTGGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATTGACCTTCAACAGGAAAAGAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGTCATGGTTGAGCTGGGGAAGTTTGAAAAGGAAGGAGTTTAAAAAGTTCCAGTTTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KKEAQALRWLVDRNQNFSSQEFWGLVFKD'
2274. .2279
/gene="FUT10"
2295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="FUT10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1359.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 o
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                    1000
                                                                                               1275
                                                                                                                                                                                880
                1060
                                                                                                                                                     1215
                                                                                                                                                                                                                                    820
                                                                                                                                                                                                                                                                1095
                                                                                                                                                                                                                                                                                                                       1035
                                          1335
                                                                                                                         940
                                                                                                                                                                                                           1155
                                                                                                                                                                                                                                                                                           760
                                                                                                                                                                                                                                                                                                                                                 700
                                                                                                                                                                                                                                                                                                                                                                           975
                                                                                                                                                                                                                                                                                                                                                                                                      640
                                                                                                                                                                                                                                                                                                                                                                                                                                   915
                                                                                                                                                                                                                                                                                                                                                                                                                                                            580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
```

1081 AAGCTGAAGGGTGAGATCTCTA	Db Cy	QY 1 ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG 60	Qy Db
21 GCAAGTTACATCAGACGACTG	5 & S	Query Match 99.3%; Score 1451.4; DB 9; Length 3610; Best Local Similarity 99.6%; Pred. No. 0; Matches 1455; Conservative 0; Mismatches 6; Indels 0; Gaps 0;	Que: Best Matc
61 TGGCTTCCAAGTAAC/ 36 TGGCTTCCAAGTAAC/	Qy dd		ORIGII
901 TGGAGGCCACTGAAACTGGGGG 	ДУ	.1467 =="Glyco_transf_10; Region: Glycosyltransferas ucosyltransferase). This family of syltransferases are the enzymes transferring f	_
841 TATAAGTTTATCCTAGCTTTT	A dd		
781 CAGCAGCTGAAAAATCCAGCC 1156 CAGCAGCTGAAAAATCCAGCC	P Q	SFLKKEGTTENKKKWELDSYGTMLWWSPLYGETGRLGQCGADACEFTIRRTYLHHHM TKAFILPYGTDBUDSLPIRKAHHDWAVFHEESPKNNYKLFKKPVITLFNYTATFSRH SHLPLTTQYLESIEVLKSLRYLVPLQSKKKLRKRLAPLVYVQSDCDPSGRASYWREL MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEK	
721 CTGATGACTTACATCGAGGTCG	B &	/procent_ra="G1:39645817" /db_xref="G1:39645817" /translation="MVRIQRRKLLASCLCVTATVFLLVTLQALDTVENLMKVTGPPQG /translation="MVRICRRKLLASCLCVTATVFLLVTLQALDTVENLMKVTGPPQG /TDSMQCFNDQRPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKMEEAPTHLN	
	של	,	
661 CIGGIGIATGIACAGICAGAC	Ş		
601 TCACTCCGATACCTAGTTCCTT	Db Oy	/ tions Not / 1 invade 5129060" /tissue type="Brain, adult, 6 pooled whole brains" /clone Tib="NHI MGC 114" /lab host="DH10B"	
>-	Db		
541 AGCAGGCATTCCCACTTGCCA	Qy	rce	
481 AACAATTATAAGCTCTTTCAT!	рр	Series: IRAK Plate: 135 Row: f Column: 2 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 19923647. FEATURES Location/Qualifiers	FEATU
	סט	Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/ILML at: http://image.llnl.gov	
736 CTCCATCATCACATGACCAAA	Qy Qy	McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L., Young,A., Zhang,LH. and Green,E.D.	
	Q	Dietrich, N. L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, SL., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, O.L., Masiello, C., Maskeri, B., Mastrian, S. D., McCloskev, T. C.	
301 ACTGGGAGGTTAGGCCAATGTV	당 상	<pre>contact: nisc_mgc@nngri.nih.gov Akhter,Nv., Ayelle,Kv., Beckstrom-Sternberg,S.M., Benjamin,B., Blakesley,R.W., Bouffard,G.G., Breer,K., Brinkley,C., Brooks,S.,</pre>	
616 AGAAAATGGGAATTGGACAGC	Db	Gaithersburg, Maryland; Web site: http://www.nisc.nih.gov/	
241 AGAAAATGGGAATTGGACAGO	νQ	DNA Sequencing by: Autional Institutes of Health Intramural Sequencing Center (NISC),	
181 GAAGCACCTACGCATCTTAAT	g gy	mmail: cgapos-remail.nin.gov Tissue Procurement: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by The I was G G Goranting (True)	
496 AAGTTTGAAAGGAAGGAGTTT	Db	REMARK NIH-MGC Project URL: http://mgc.nci.nih.gov COMMENT Contact: MGC help desk	COMME
121 AAGTTTGAAAGGAAGGAGTTT	γQ	Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA	
436 CGGCCTTTATCTAACACCAGG	Db		JOL
61 IGGCCTTTATCTAACACCAGG	ργ	AUTHORS Strausberg,R. TITLE Direct Submission	REFER AUI TII
	•		1

```
CTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG
                           GCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                   GETAGTCCCTGTATATTACGGATCCCCCAGCATCACAGAC
                                                                                                                IGAGAATSCAGTTIGIGATGACTACATCACTGAGAAGTIC
                                                                                                                                            CGATTCCTATGGTGAATGTTTACGAAACAAGACCTCCCT
                                                                                                                                                                                                    TITGCAGTCCAAAAACAAGCTTAGAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                             CCATCATGACTGGGCTGTTTTCATGAAGAGTCCCCGAAA 480
                                                                                                                                                                                                                                                                                                                                                  AGCATTCCTCTTCTATGGTACTGACTTTAACATAGATAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
       AACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG 1140
                                                      GCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG 1395
                                                                                                                                                                                                                                                                                                                                                                                       TGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                               rggagcagatgcttgtttcttcaccatcaaccgacctac
AACCAGCGACTTCTGACAGCTGTCAGGGAACCGAAATGG
1515
                           1455
                                         1080
                                                                      1020
                                                                                    1335
                                                                                                                1275
                                                                                                                              900
                                                                                                                                            1215
                                                                                                                                                          840
                                                                                                                                                                         1155
                                                                                                                                                                                       780
                                                                                                                                                                                                     1095
                                                                                                                                                                                                                                 1035
                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                        915
                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                  960
                                                                                                                                                                                                                                                              975
                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                  795
                                                                                                                                                                                                                                                                                                                                                                               735
                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                            675
                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                       615
                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               495
```

APLYVYOSOCDPPSDBDSYVRELMTYIEVDSYGECLBNKDLEQOLKNPASMDADGI IIAQYKKILAFENNAVCDDYITEKFWRPLKLGVYPYYGSPSITDM-SSNESALLAV SHPRELSYLRYLSDRILFBAYWRKLKGEISVGREITM-SSNESALLAV SHPRELSYLRYLSDRILFBAYWRKLKGEISVGREITM-SSNESALLAV SHPRELSYLRYLSDRILFBAYWRKLKGEISVGREITM-SSNESALLAV INSFREGEKKEAQALRWLVDRNQNFSSQEFWGLVFKD" [GIN 100.0\$;	Db 106: Oy 96: Oy 102: Oy 102: Oy 108: Oy 114- Oy 114- Oy 120: Oy 124- Oy 114- Oy 120: Oy 120: Oy 132 Oy 133 Db 148 Oy 138 Ob 149 Oy 138 Ob 149 Oy 144 Oy 144 Oy 138 Ob 154 Ob	961 TGGGCTTCCAAGCTAAACTGGGGGTAGTCCCTGTATATTACGGATCCCCCAGCATCACAGC 1122 1123 TGGCTTCCAAGTAACAAAACTGGCTATTCCTGTATCACAATTTTCTCACCCCCAGGGAACTG 1020 1121 TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCACAATTTTCTCACCCCCAGGGAACTG 1020 1021 GCAAGTTACATCAGAACGAACTGGATTCTTGATGACAAATTTTCTCACCCCCAGGGAACTG 1020 1021 GCAAGTTACATCAGACGAACTGGATTCTTGATGACAAATTTTCTCACCCCAAGGGAACTG 1020 1021 AAGCTGAAGGGTGAACTGGATTCTTGATGACAAATTTTCTCACCCCCAGGGAACTG 1020 1022 AAGCTGAAGGGTGAACCAACTGGATTCTTGATCACAATTTTCACCCCCAGGGAACTG 1140 1141 GGAAGTTACAAGAGTCAACCAAGGAACTTTCACACAATTTTACATCCAGGGAACTGAAATTGG 1140 1141 GGAAGTTCAAGAGTCAACCAAGGAACTTTACATCGATGAAAGATTGGTAGGGAACTGAAATTGG 1140 1141 GGAAGTTCAAGAACTTCTAACCAAGGAACTTTGAACTATTTACATTCTATGATTGAT
361 CTCCATCACATGACCAAAGCATTCCTCTTCTATGGTACTGACTTTAACATAGATAG	- -	$\omega $
421 TTACCTCTGCCTCGGAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA	488 85	BC063462 3610 bp mRNA linear F Homo sapiens cDNA clone MGC:74714 IMAGE:5198060, comp BC063462 BC063462.1 GI:39645816
541 703	SOURCE	Homo sapiens (numan) Homo sapiens Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; B; Eukaryota; Metazoa; Primates; Catarrhini; Hominidae;
φ)— φ) σο σο	AUTHORS	Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J. Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F. Hopkins, R.F., Jordan, H., Worden, K., Wang, J., Wan
OY 661 CTGGTGTATGTACAGTCAGACTGTGACCCATCATCAGACAGGGACAGCTATGTTCGCGAG 882 Db 923 CTGGTGTATGTACAGTCAGACTGTGACCCCACCATCAGACAGGGACAGCTATGTTCGCGAG 882		Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L. Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., P
OY 721 CTGATGACTTACATCGAGGTCGATTCCTATGGTGAAIGTTTACGAAACAAAGACCTCCCT 780		Abrameon, R.D., Mullahy, S.J., Mosak, S.A., McKernan, K.J., Malek, J.A., Gunarathe, P.H., Richards, S. McKernan, K.J., Malek, J.A., Gunarathe, P.H., Hulyk, S. Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S. Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gib
OY 781 CAGCAGCTGAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG 840		Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevche Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E Bickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J.
_	TITLE	Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailu Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 f
ALMAGILIA IUUINGU II IOAGAAA GAAAA AAAAA AAAAAAAAAAAAAAAA	SEN.	human and mouse cDNA sequences proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (

```
Š
                                 Ď,
                                                        Ś
                                                                                멍
                                                                                                         Ś
                                                                                                                                                        Ş
                                                                                                                                                                                                              Ş
                                                                                                                                    B
                                                                                                                                                                                      В
                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1461;
                                    781
                                                          781
                                                                                                                                     661
                                                                                                                                                              661
                                                                                                                                                                                      601
                                                                                                                                                                                                              601
                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                    721
                                                                                                            721
                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent: WO 0232962-A 3 25-APR-2002;
Millennium Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
TATAAGTTTATCCTAGCTTTTGAGAATGCAGTTTGTGATGACTACATCACTGAGAAGTTC
                                                                                                                                                                                                   TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAAACAACCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                CAGCAGCTGAAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                   CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                    CTGATGACTTACATCGAGGTCGATTCCTATGGTGAATGTTTACGAAACAAAGACCTCCCT
                                                                                                                                                 CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG 720
                                                                                                                                                                                                                                                      AGCAGGCATTCCCACTTGCCACTAACCTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                                         AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC 540
                                                                                                                                                                                                                                                                                                                                                        TTACCTCTGCCTCGGAAAGCCCCATCATGACTGGGCTGTTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCCTTTATCTAACACCAGGAGCAGCGAGCACATAAAAAGAGGTCATGGTTGAGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                                                                                                                    CTGGTGTATGTACAGTCAGACTGTGACCCACCATCAGACAGGGACAGCTATGTTCGCGAG
                                                                                                                                                                                      TCACTCCGATACCTAGTTCCTTTGCAGTCCAAAAACAAGCTTAGAAAAAAGACTTGCTCCG
                                                                                                                                                                                                                                       AGCAGGCATTCCCACTTGCCACTAACTACCCAATACTTGGAGAGCATTGAAGTCCTGAAG
                                                                                                                                                                                                                                                                                       AACAATTATAAGCTCTTTCATAAACCAGTGATTACCTTGTTCAACTACACTGCCACGTTC
                                                                                                                                                                                                                                                                                                                                                                                         ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAAAATGGGAATTGGACAGCTACCCCATTATGCTCTGGTGGTCCCCGCTGACGGGGGAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGCACCTACGCATCTTAATTCATTTCTTAAGAAAGAAGGATTGACCTTCAACAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTTTGAAAGGAAGGAGTTTAAAAGTTCCAGTTTGCAAGATGGACATACAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGAAAGTCACGGGCCCTCCCCAGGGAGTTACAGACTCCATGCAATGCTTCAATGATCAG
                                  CAGCAGCTGAAAATCCAGCCTCTATGGATGCCGATGGCTTTTATAGGATCATTGCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGGGAGGTTAGGCCAATGTGGAGCAGATGCTTGTTTCTTCACCATCAACCGGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                        GAAAGCCCATCATGACTGGGCTGTTTTTCATGAAGAGTCCCCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1461;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
          900
                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                         840
                                                                                                            780
                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                  840
                                                                                   780
                                                                                                                                    720
                                                                                                                                                                                    660
                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

841

900

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                            RESULT 2
AX592444
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                문, 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                       FEATURES
                                                                                                                                                                                            JOURNAL
                                                                                                            SGD
                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                1441
                                                                                                                                                                                                                                                                                                                                                                                                                                     1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                Glucksmann,M.A. and Meyers,R. 80090, 52874, 52880, 63497, and 334 human proteins and uses thereof Patent: WO 0332962-A 1 25-APR-2002; Millennium Pharmaceuticals, Inc. (U
                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                  Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                            AX592444
Sequence 1 from
AX592444
                                                                                                                                                                                                                                                                                                                  AX592444.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCTAGTATTCAAGGACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCTAGTATTCAAGGACTGA 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCAGGCACTAAGGTGGCTGGTTGATAGGAATCAAAACTTTTCATCTCAAGAGTTTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGATACCCACCTGAGTTGCCCAGAGCCCACAGTGTTTTGCTTTCTCACCACTCCGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGCTTACCACCCAAAAGATGGGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGTGCAAGACGTCAACCAGGACAATTACATCGATGCATTTGAGTGTATGGTGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCTGAAGGGTGAGATCTCTAACCAGCGACTTCTGACAGCTCTCAGGGAACGGAAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAAGTTACATCAGACGACTGGATTCTGATGACAGATTGTATGAGGCCTATGTAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCTTCCAAGTAACAAAAGTGCTATTCTTGTATCAGAATTTTCTCACCCCAGGGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGGTGTGGGCTAATATCAGGCTTCAGGAAAAGGGGCTTACCACCCAAAAGATGGGAGGCA
/organism="Homo sapiens"
/mol_type="unassigned DNP
/db_xref="taxon:9606"
163. .1623
                                                                                                                                                                     Location/Qualifiers
                                                                                               note="unnamed protein
                                                                                                                                                                                                                                                                                                                  GI:27950546
                                                                                                                                                                                                                                                                                                                                        1669 bp
Patent WO0232962.
                                                                                                                                                                                                                                                                                                                                                                                                               1461
                                                                                                                                                                                                                                                       Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                   DNA"
                                                                                                 product'
                                                                                                                                                                                                                    33425 methods
                                                                                                                                                                                  (SD)
                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                       Hominidae;
                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                    and
                                                                                                                                                                                                                   compositions
                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                      27-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
```

```
Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                September 12, 2004, 19:48:00 ; Search time 3891.02 Seconds (without alignments).
16274.436 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-080-960-3
1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3470272 seqs, 21671516995 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atgaaagtcacgggccctcc.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb_on:
gb_pat:
gb_pat:
gb_ph:
gb_pr:
gb_ro:

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gb_ba:*
gb_htg:*
gb_in:*
em_pat:*
em_ph:*
em_ph:*
em_ph:*
em_ro:*
em_ro:*
em_ro:*
em_ro:*
em_ro:*
em_htg_inv:*
em_htg_mus:*
em_htg_mas:*
em_htg_mas:*
em_htg_mas:*
em_htg_mas:*
em_htg_mas:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_or:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .gcctagtattcaaggactga 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6940544
```

Pred.

No.

5.

the

number of results predicted by chance

to have

REFERENCE AUTHORS TITLE

Glucksmann,M.A. and Meyers,R. 80090, 52874, 52880, 63497, and human proteins and uses thereof

33425 methods and compositions of

Homo sapiens (human) Homo sapiens Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

RESULT 1
AX592446
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM

Sequence 3 from Patent 1 AX592446 AX592446.1 GI:27950548

AX592446

1461 bp WO0232962.

DNA

linear

PAT 27-JAN-2003

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	0 0 4 4 5 4	4.4	C 41	. ω	38	37	36.0	ω Ain	33	32	ى بى د د	229	28	27	26	25) L	222	c 21	20	19	. ب	16	c 15	14	13	112	c 10	o	oo -	7 0	י א	4.1	ω	2	⊢ !	Result No.	
	109.8	16.	29.	ຸ້ວ	16		78 t	7.0	80.		۳ تر ت	.86	•	30.	30.	ω 5.	D C	oω	0	30	370.8	ر د د		62	57.		0 00	38.	13	084	132	יי טרי טרי	. 9	451.	46	44	Score	
	7.5				-	N	N !	J K	N	2	s i	با د	4.	ຫ	'n	o :	۷.	٥.	0	0		4 n	۰. ب	2	5	. 4	٠. ٦	.7	9	4	7:	٠,	ى د •	9		100.0	ate	96
	265382	1874 4936	9787	240	40	ω	133	որ Մա	90	47	۲, ت	1 5	86	4	45	50	3 t	2 U	98	111	400	0 1 2 2	5 59	97	65	~I ~	200	12	ω	65	60 0	, נ	7 1	13	9	0		
	N N	210	ហ្វ	лω	on	ω	ωı	ა თ	φ	σį	- -	٠ -		0	Φ	σv	, פ	0 0	N	9	21	ى ₁	, o	N	ហ	10	ی ر _د د	o o	4.	9	φı	٥	o c	v	ď	6	BB	
ALIGNMENTS	AC137179 AC114439	20	143	200	0	ω.	20	7 2	ິພ	286	5 6	1 0	752	29	ä	8	2	5 5	ĕ	æ	ŏï	ດິບິ	20	7	69	2	144	. ω	579	83	4	9 6	100	62	4	4	Ð	
	2 2	27920	16543 Gasterost	16544	33606 Sequence	61932 Drosophi	02046	09163 Mus musc	36037	85 Sequence	542393 Mus mus	14811 Ciona in	35752 Gallus ga	16529 EST and	20976	69	56199 Homo sap	os Komo sap	90087 Homo sap	04884	06 Danio re	40592	14120 Sequence	15775	35692 Gall	062113 Mus musc	03.0474 Mis	67838 Homo	44579 Bos	35839 Homo	512465 Homo	535838 Homo	431184 HOMO	52 Homo	X592444 Seque	92446 Sequen	tion	

This Page Blank (uspto)

```
hypothetical protein T05A7.5 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Pate: 20-Sep-1999 #sequence_revision 20-Sep-1999 #t-C;Accession: T16799 R;Chissoe, S.
                                                                                                                    RESULT 15
T16799
                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GDB:135180; OMIM:136836
A;Map position: 19p13.3-19p13.3
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: mRNA
A;Residues: 1-304 <RES>
A;Cross-references: EMBL:U27332; NID:g967200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Cameron, H.S.; Szczepaniak, D.; Weston, B.W.
J. Biol. Chem. 270, 20112-20122, 1900.
A;Tille: Expression of human chromosome 19p alpha(1,3)-fucosyltransferase
A;Reference number: I39043; MUID:95378269; PMID:7650030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha (1,3) fucosyltransferase FUT6-related splice C;Species: Homo sapiens (man) C;Date: 01-Mar-1996 #sequence_revision 01-Mar-1996 C;Accession: I39049
  submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Keywords: alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Gene: GDB:FUT6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: I39049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Status: preliminary
, S.
to the EMBL
                                                                                                                                                                                                     261
                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                 213
                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                            116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                                                                                                                                                                                                                                                                                                    193 LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 72; Conserv
                                                                                                                                                                                                   RNALEAWAVPVVLG-----PSRRNLIFL 283
                                                                                                                                                                                                                                                                                                           MIYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301
                                                                                                                                                                                                                                                                               QAHLKVDVYGR--SHKPLPQ------GTMETLSRYKFYLAFENSLHPDYITEKLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY
                                                                                                                                                                                                                                         R-PLKLGVVPVYYGSPSITDWLPSNKSAILV 331
                                                                                                                                                                                                                                                                                                                                                             RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                            PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN-----LTMSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIPLILLWIWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSFLHIKTMEDVEPVAKRMKYLAANPAAYNQTLRWKYEGPSDSFKALV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PVQPKT---ERAIAAAFI-SNCGARNFRLQALEALMKINIKIDSYGGCHRNRD------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NODNYIDAFECMVCTKVWANIRLQEKGLP 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSN 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELM-TYIEVDSYGECLRNKDLPQQLKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -- DMAAVHSSCRLCIFLATRVREQEEESP 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDV 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -GKVDK---VEALKRYKFSLAFENTNEEDYVTEKFFQSLVAGSVPVVVGPPNIEEFAPAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.1%; Score 185.5; DB 2; llarity 26.6%; Pred. No. 7.9e-07; Conservative 35; Mismatches 91;
                                                       #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
Data Library,
  November 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN: AAC50191.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text_change 29-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     form II -
                                                                                                                                                                                                                                                                                                                                                             -VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 304;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID:g967201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genes
                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192
                                                                                                                                                                                                                                                                                 260
                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 norma
```

Search completed: September Job time : 44 secs

ø

2004,

21:46:57

```
S
                                          문
                                                                     Ś
                                                                                                                    밁
                                                                                                                                                    Ş
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Gene: CESP:T05A7.5
A; Introns: 7/1; 43/3; 71/3; 132/1; 203/2; 247/3; 290/2; 315/3; 351/3; 407/2; 4/1; 1535/3; 1565/2; 1609/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:U40028; NID:g1055143; PID:g1055144; PIDN:AAA81114.1; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Description: The sequence of C. A;Reference number: Z18580 A;Accession: T16799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues: 1-1652 < CHI >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                   139
                                                                                   321
                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                                                                               100 ETGRLGQCG---ADACFFTI-NRTYLHHHMTKAFLFYGTDFNIDSLPL---PRKAHHDWA 152
                                                                                                                                                                                                                                                                                                                 153 VFHEESP-KNNYKLFHKPVITLFNYTATFSR-----HSHLPLTTQYLESIEVLKSLRYLV 206
                                                                                                                                                                                                                                                                                                                                                        31 ENSILEDCSEKIKNSCTVTSNNKTF---PIADAIVFHSRDINETKLSFFNKNRRYDIPYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                    similarity 22.0%;
      GVQDVNQDNYIDAFECMVCTKV 402
                                            LGIPDSMYIAVDDYPNLEEFVHHIQNVTSNEEEYMKYHKWR---
                                                                                 WLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKW 380
                                                                                                                      RGPPGCDV----KFHSPYKFAIAFENSNCKDYVTEKFWK--KAGIYKTVPIVMSRKIYRD 245
                                                                                                                                            KNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGV---VPVYYGSPSITD 320
                                                                                                                                                                                                 IWNSKTK-----ETLWMVSNGNAQNKRKELVEKLIKKGMSIDLYGQLYKKEPAECPRR- 191
                                                                                                                                                                                                                                    PLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTY-IEVDSYGECLRNK--DLPQQL 263
                                                                                                                                                                                                                                                                             MMAMENPFFAGLTVYH----NFFNWTMTYRTDSDIFHPYGAFVKSYVPA----EVNYSE 138
                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    62;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 173.5; DB 2
Pred. No. 7.1e-05;
52; Mismatches 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      elegans cosmid T05A7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                      126;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1652;
                                                                                                                                                                                                                                                                                                                                                                                                                                    63
'
                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                            KQF 289
                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   449/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CESP:TC
```

```
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-433 <GER>
A;Cross-references: GB:U33457; NID:g1039426; PIDN:AAC52269.1; PID:g1039427
A;Cross-referes: GB:U33457; NID:g1039426; PIDN:AAC52269.1; PID:g1039427
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
C;Keywords: glycosyltransferase; hexosyltransferase
RESULT
JC4591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Gersten, K.M.; Natsuka, S.; Trinchera, M.; Petryniak, B.; Kelly, R.J.; Hiraiwa, J. Biol. Chem. 270, 25047-25056, 1995
A;Tile: Molecular cloning, expression, chromosomal assignment, and tissue-specif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   alpha-1,3-fucosyltransferase Fuc-TIV (BC 2.4.1.-) - mouse N;Alternate names: ELAM-1 ligand fucosyltransferase homolog C;Species: Mus musculus (house mouse) C;Species: Mus musculus (house mouse) C;Date: 08-Feb-1996 #sequence_revision 08-Feb-1996 #text_change 11-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유정
                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                     ਰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: A57596; MUID: 96027607; PMID: 7559635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Accession:
                                                                                                                                                                                                  12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152
                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                                       396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90 IMLWWSPLTGETG------RLGQCG--ADACFFTINRTYLHHH------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A57596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A57596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --LVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPGLRGLAKDLENWTLSYRTDSDVFVPYGFLYSRS-----DPTEQPSGLGPQLARKR 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPWGARERTDKALVLRVFDDQEGAVTLTGKALETVGSRPPGQRWVWMNFESPS-----H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VLLWWEPFRGRGGYPKSPPDCSLRFNISGCRLLTDRAAYGEAQAVLFHHRDLVKELHDWP 151
                                                                                                                                                                                                                                                                                                                                                                                        HPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFE 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLVAWVVSNWNEHQARVRYYHQLSRHVSVDVFGRTGPGRPVP-----AIGLLHTV 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KPVI-----TLFNYTATFSRHSHLFLTTQYLESIEVLKSLRYLVFLQSKNKLRKRLAF--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----HIWAFLFYGTDFNIDSLPLPRKA-----HHDWAVFHEESPKNNYKLFH 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----CRVCQAV-----QRAGDRPK 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VDDFPSASSLASYLLFLDRNPAVYRRYFHWRRSYAVH----ITSFWDEPW---
                                                                                                                                                                                                                                                                                                       CMVCTKVWANIRLQEKGLPPK
                                                                                                                                                                                                                                                                                                                                                                                                                                  ARYKFYLAFENSRHVDYITEKLWRNAFLAGAVPVVLGPDRANYERFVPRG-AFIHVDDFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AQYKFILAFENAVCDDYITEKFWRPLKL-GVVPVYYG--SPSITDWLPSNKSAILVSEFS 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDAFECMVCTKVWANIRLQEKGLPPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8.1%; Score 213; DB 2;
23.4%; Pred. No. 9.4e-09;
rative 48; Mismatches 140
                                                                                                                                                                                                                                                                                                                                                LDRNVAVÝRRÝFRWRRSFAVH----
                                                                                                                                                                                                                                                               -QTSGDQPK
                                                                                                                                                                                                                                                                                                       416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140;
                                                                                                                                                                                                                                                                                                                                                  -ITSFWDEQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and tissue-specific exp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                  407
```

```
probable fucosyltransferase [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Becies: Arabidopsis thaliana (mouse-ear cress)
C;Ante: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
C;Accession: F96533
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Ccnn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.
ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.
C.A.; Li, J.H.; Li, Y.; Liu, S.X.; Liu, S.X.; Liu, S.A.; Luros, J.S.; Maiti, R.; Marziall,
R;Zzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon,
ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A;Recession: F96533
A.;Accession: F96533
A. (Status, Transitionary)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: JC4591
A;Accession: JC4591
A;Rocession: JC4591
A;Rocession: JC4591
A;Residues: 1-400 < CZA>
A;Residues: 1-400 < CZA>
A;Cross-references: DDBJ:D63379
A;Cross-references: DDBJ:D63379
A;Experimental source: Embryonal carcinoma F9 cells
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
C;Keywords: glycoprotein; glycosyltransferase; hexosyltransferase; c;Keywords: glycoprotein; glycosyltransferase; hexosyltransferase; F;1-23)Domain: httracellular #status predicted <INT>
F;24-49)Domain: transmembrane #status predicted <INT>
F;84,185/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-513 <STO>
A; Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 89
Query Match
Best Local Similarity
Matches · 58; Conserv
                                                                                                                                           Gene: F14J22.8
                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 7.9%;
Local Similarity 23.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90 IMLWWSPLTGETG-------RLGQCG--ADACFFTINRTYLHHH------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPGLRGLAKDLFNWTLSYRTDSDVFVPYGFLYSRSDPTEQPSGLGPPLARKQGLE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----HIKAFLFYGIDFNIDSLPLPRKA-----HHDWAVFHEESPKNNYKLFH 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VCTKVWANIRLQEKGLPPK 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASLAAYLLFLDRNVAVYRRYFRWRRSFAVH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RELASYIRRIDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFECM 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YKFYLAFENSRHVDYITEKLWRNAFLAGAVÞVVLGÞDRANYERFVÞRG-AFIHVDDFÞNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YKFILAFENAVCDDYITEKFWRPLKL-GVVPVYYG--SPSITDWLPSNKSAILVSEFSHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -AWVVSNWNEHQAQVRYYHQLSRHVSVDVFGRTGPGRPVP------AIGLLHTVAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KPVI----TLENYTATESRHS--HLELTTQYLESIEVLKSLRYLVELQSKNKLRKRLAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPWGARERTDKALVLRVFDDQEGAVTLTGKALETVGSRPPGQRWVWMNFESPS-----H 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VLIWWEPFRGRGGYPKSPPDCSLRFNISGCRLLTDRAAYGEAQAVLFHHRDLVKELHDWP
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                GB:AE005173; NID:g10120428; PIDN:AAG13053.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -QTSGDQPK 389
                          7.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44;
  37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 208; DB 2;
Pred. No. 2.1e-08;
  Score 203; DB 2; ]
Pred. No. 7.1e-08;
7; Mismatches 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ITSFWDEQW--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                           Length 513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 100;
        Indels
     30;
                                                                                                                                                                                                   GSPDB:GN00141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 227
     6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
```

```
A; Map position: 9pter-9qter
C; Superfamily: galactoside 3(4)-L-fucosyltransferase
C; Superfamily: galactoside 3(4)-L-fucosyltransferase
C; Seywords: 9lycopyrotein; 9lycosyltransferase; hexosyltransferase
F;1-34/Domain: signal sequence #status predicted <SIG>
F;1-34/Product: alpha(1,3)-fucosyltransferase 7 #status predicted <MAT>
F;35-34/Product: alpha(1,3)-fucosyltransferase 7 #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha(1,3)-fucosyltransferase (EC 2.4.1.-) 7 precursor - human NyAlternate names: leukocyte fucosyltransferase FucTVII C;Species: Homo sapiens (man) C;Date: 02-Aug-1994 #sequence_revision 02-Aug-1994 #text_change 20-Apr-2000 C;Accession: A54057; A53713 R;Sasaki, K.; Kuratta, K.; Funayama, K.; Nagatta, M.; Watanabe, E.; Ohta, S.; Hanai, J. Biol. Chem. 269, 14730-14737, 1994 A;Title: Expression cloning of a novel alphal,3-fucosyltransferase that is involved A;Reference number: A54057; MUID:94237894; PMID:8182079 A;Accession: A54057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:X78031; NID:g516292; PIDN:CAA54962.1; PID:g516293 R;Natsuka, S.; Gersten, K.M.; Zenita, K.; Kannagi, R.; Lowe, J.B.
J. Biol. Chem. 269, 16789-16794, 1994
A;Title: Molecular cloning of a cDNA encoding a novel human leukocyte alpha-1,3-fucosyl A;Reference number: A53713; MUID:94266898; PMID:8207002
A;Accession: A53713
음 성
                                                                                                                                                        밁
                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-160,'A',163-303,'SV',306-342 <NAT>
Ā;Cross-references: GB:U08112; NID:g520463; PIDN:AAA56869.1; PID:g520464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Cross-references: GDB:373982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Gene: GDB: FUT7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Residues: 1-342 < SAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              291/Binding site: carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                                                                                                                                                                                                                  303
    302
                                                                          361
                                                                                                                                                                                                                                                                                                            196
                                                                                                                                                                                                                                                                                                                                                     244 YIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR- 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127 KAFLFYGTDFNIDSLPLP---RKAHHDWAVFHEESPKWNYKLFHKPVITLFNYTATFSRH 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
RDRLRV---RLFTDWRERFCAICD
                                                                                                                                                                                                                              PLKLGVVPVYYGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW
                                                                                                                                                                                                                                                                                                                HLRVDVFGRA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SDIFVPYGRLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WELDSYP-----IMLWWSPLTGETGRL-----GQCGADACFFTINRTYLHHHMT
                                                                          KLKGEISNORLLTALRERKWGVQD 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMT 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAVVFHHRELQTRRSHLPLAQRPRGQPWVWASMESPSHTHGLSH--LRGIFNWVLSYRRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WLLGSAPRGTPAPQPTITILVWHWPFTDQPPELPSDTCTRYGIARCHLSANRSLL--ASA
                                                                                                                                                        ALVAGTVPVVLGPPRATYEAFVPAD-AFVHVDDFGSARELAAFLTGM--NESRYQRFFAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTKV 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ELAAYVKRIGDDPVAYSEYHAWRRCGIMGNYGKTRAVS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFECMV 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHYKFVLAIENTAVESYVTEKLFYALDSGSVPIYFGASNVQDFVPPH-SVIDGSKFGSMQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26.2%;
                                                                                                                                                                                                                                                                                                            ----NGRPLCASCLVPTVAQYRFYLSFENSQHRDYITEKFWRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -PHWGPSPPLPAKSRV-----AAWVVSNFQERQLRARLYRQLAP 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 224; DB 2;
Pred. No. 9.5e-10;
2; Mismatches 133
322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            that is involved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Residues: "MRRIWGARKPSGAGWEKEWAEAPQEAPGAWSGRLGPGR", 'SGRKGRAVPGWASWPAHLALAARPARHIGG A; Cross-references: GB:M88597; NID:g182070; PIDN:AAA63173.1; PID:g182071
A; Note: the codon used as an initiator for this translation is not in a good context R; Lowe, J.B.; Kukowska-Latallo, J.F.; Nair, R.P.; Larsen, R.D.; Marks, R.M.; Macher, J. Biol. Chem. 266, 17467-17477, 1991
A; Title: Molecular cloning of a human fucosyltransferase gene that determines express A; Reference number: A40976; MUID:91373370; PMID:1716630
A; Status: preliminary A; Molecular type: DNA
A; Cross-references: GB:M65030; NID:g182791; PIDN:AAA92977.1; PID:g1236720
A; Cross-references: GB:M65030; NID:g182791; PIDN:AAA92977.1; PID:g1236720
A; Kumar, R.; Potvin, B.; Muller, W.A.; Stanley, P.
Biol. Chem. 266, 21777-21783, 1991
A; Title: Cloning of a human alpha (1,3) -fucosyltransferase gene that encodes ELFT but A; Reference number: A41202; MUID:92042084; PMID:1718983
A; Accession: A41202; MUID:92042084; PMID:1718983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: galactoside 3(4)-1-1009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/10009/100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
B36340
B36340
alpha(1,3)-fucosyltransferase (BC 2.4.1.-) 4 precursor [validated] - human
alpha(1,3)-fucosyltransferase (BC 2.4.1.-) 4 precursor [validated] - human
Alpha(1,3)-fucosyltransferase (ELFT); FCT3A; FUC-TIV;
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 20-Apr-2000 #sequence revision 20-Apr-2000 #text_change 20-Apr-2000
C;Date: 20-Apr-2000 #sequence revision 20-Apr-2000 #text_change 20-Apr-2000
C;Accession: B36340; A39340; A49976; A41202
R;Goelz, S.E.; Hession, C.; Goff, D.; Griffiths, B.; Tizard, R.; Newman, B.; Chi-
B 8
                                                                                                                                                    В
                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cell 63, 1349-1356, 1990
A;Title: ELFT: a gene that directs the expression of an A;Reference number: A36340; MUID:91084863; PMID:1702034
                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Map position: 11q21-11q21
C; Superfamily: galactoside 3(4)-L-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-240, 'D',242-400 <KUM>
A;Cross-references: GB:S65161; NID:g239005; PIDN:AAB20349.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: GDB:FUT4; CD15; FCT3A; FUC-TIV
A;Cross-references: GDB:131563; OMIM:104230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-405 < GOE1 >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: B36340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Accession: A36340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:M58596; NID:g182068; PIDN:AAA63172.1; PID:g182069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                          167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66 VILIWWEPFGGRDSAPRPPPDCRL-RFNISGCRLLTDRA--SYGEAQAVLFHHRDLVKGPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90 IMLWWSPLTGETG-----RLGQCGADACFFTINRTYLHHHMTKAFLFYGTDF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
LLHTVÅRYKFYLAFENSQHLDYITEKLWRNALLAGAVÞVVLGÞDRANYERFVÞRG-AFIH
                                                                                                                                                                                                                                                                                                                                                                                      HKPVI-----TLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAP-
                                                                          FYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPVYYG--SPSITDWLPSNKSAIL
                                                                                                                                                        LSRKQGLVAWVVSHWDERQARVRYYHQLSQHVTVDVFGRGGPGQPVPE-----IG
                                                                                                                                                                                                                                  -----LVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADG 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DWPPPWGIQAHTAEEVDLRVLDYEEAAAAAEALATSSPRPPGQRWVWMNFESPS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8.4%; Score 221; DB 2;
23.8%; Pred. No. 2.1e-09;
tive 39; Mismatches 139
                                                                                                                                                                                                                                                                                                                ----DVFVPYGYLYPRSHPGDPPSGLAPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ELAM-1 ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PID:g239006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                            224
                                                                                                                                                                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
```

	0) THREFERENT FOR ADDIARGIND AUTTURANATA CAMPANATA TATES
279	
Db 217 LPHRDRLAKSLLDLIPHHSFGKCLNNVGGLDSALSNYPECVAEHNAEAKWYDHLHCAM 274	90 IM
QY 229 DPPSDRDSYVRELMTYIEVDSYGECLRN-KDLPQQLKNPASMDADGFYRII 278	al Similarity 26.5%; Pred. No. 6.4e-11; 94; Conservative 43; Mismatches 115; I
Db 174ISYHAKDDVQTTYAGSL-FHNNRNYHISPHKNNDVLVYWSSSRC 216	stch 9.1%; Score 239.
Qy 170 VITLENYTATESRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLYVVQSD-C 228	tucosyltran exosyltrans
Db 124 WTKSSVLADSPDALLFETTTPPLQRRVGDPLRVYMELEAGRKRSGREDIF 173	;Note: alternative splicing 5, to
QY 114 FTINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKP 169	~ ~.
Db 88 CGKLKMKHVKVLVKGWTWIPDNLENLYSCRCGM-TCL 123	;Cross-rete;Genetics:
OY 55 -GHTKMEBAPTHLNSFLKKEGLTFNRKRKWELDSYPINLWWSPLTGETGRLGQCGADACF 113	;Molecule type: mkNA ;Residues: 1-361 <re3></re3>
Db 28 SMEHSIDPEPKLSDSTSDPFSDVLVAYKKWDFEVGCARFRENHKDAILGNVSSGSLQEFG 87	;Accession: I39 ;Status: prelim
OY 13 SMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQD 54	;Residues: 1;Cross-refer
l Similarity 24.3%; Pred. No. 3.9e-10; 103; Conservative 60; Mismatches 159;	Status:
/ Match 8.8%;	;Cross-refe ;Accession:
A/Gene: P17M19.14 A/Map position: 1	Molecule type: mrNA Residues: 1-361 <res></res>
:ics:	Accession: I39043
nle type: DNA	A;Title: Expression of human chromosome 19p alpha(1,3)-fucosyltransferase genes in norma A;Reference number: I39043; MUID:95378269; PMID:7650030
A;Accession: h90/42 A;Status: preliminary	Cameron, H.S.; Szczepaniak, D.; Weston, B.W. Biol. Chem. 270, 20112-20122, 1995
A;Reference number: A86141; MUID:21016719; PMID:11130712	Cross-references: GB:X53578; NID:g28529;
ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.	Molecule ty
<pre>k1zzo, M.; kooney, T.; kowley, D.; sakano, n. A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon,</pre>	A;Accession: A36669 A;Status: preliminary
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali,	A; Ittle: A Civiled Indian CDMA decemblies expression of a mouse stage specific empryonic a A; Reference number: A36669; MUID:91032981; PMID:1977660
Hunter J. I. : Jenkins J. : Johnson-Hopson, C. : Khan, S. : Khavkin, E	7 class 1303, 1990
Chung, M.K.; Conn, L.; Hughes, B.; Huizar, L.	ion: A36669; I39043; T39044; I39045; S12123 ka-Latallo, J.F.; Larsen, R.D.; Nair, R.P.; Lowe,
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso,	<pre>12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 03-Jun-2</pre>
hypothetical protein F17M19.14 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001 C;Date: 07-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001	galactos ate name
RESULT 8	STILT 7
DD 319 KERWKETIKEKSESWALDECNACWALDQQESRAQ 331	Db 333 FRWRETLRPRSFSWALAF-CKACWKLQQESRYQ 364 .
35) YVEWKLKGELSNQKLLTALKEK XNGVQLVNQUNILDAFECHVCLXVMANIKLQ	Qy 358 VEWKLKGEIGNQRLLTALRERKWGVQDVNQDNYIDAFECMVÇTKVWANIRLQ 409
261	
QY 301 WR-PLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEA 356	302 R-PIKTAWAYAYAYAYATINATOSNKSATINSEESHBRETAAYTRRIDSDDRIYEAY 3
213 LQAHLKVDVYGRSHKPLPKGTMMETLSRYKFYLAPENSLHPDYITEKL	Qy 242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301 Db 227 OAHLKVDVYGRSKKPLPKGTMMETLSRYKFYLAFENSLHDDYITEKLW 274
241 LMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF	Db 173 RSDSDIFTPYGWĹEPWSGQPAHPPLNĹSAKTEĹVAWAVŚNWKPDŚARVRYYQŚL 226
CY 192 YLESIEYIKSEKYLVPQSKNKLKKKHARLYVVQSUUDERSUKUSYKE 24V	Qy 193 LESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRBL 241
TIO MENOREGORNEGORNEGORNEGORNEGORNEGORNEGORNE	Db 134 LPPPTRPQQQRWIWFSMESPSN
138	QY 138 IDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192

```
A;Cross-references: GDB:135180; OMIM:136836
A;Map position: 19p13.3-19p13.3
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
C;Keywords: alternative splicing
                                                                                                                                                        A;Gene: GDB:FUT6
                                                                                                                                                                                                     A;Cross-references: EMBL:U27331; NID:g967198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  submitted to the EMBL Data Library, October 1995
A;Reference number: Z19747
A;Accession: T23491
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-451 - WAIL>
A;Residues: 1-451 - WAIL>
A;Residues: 1-451 - WAIL>
A;Cross-references: EMBL:Z66497; PIDN:CAA91285.1; GSPDB:GN00020; CESP:X08F8.3
A;Experimental source: clone K08F8
C;Genetics:
C;Gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Map position: :
A; Introns: 30/2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 99
  Query
     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   350 DDRLYEAYVEWKLKGEI-----SNQRLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWA 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420 EPR--QKVLIP-NWDA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 9.7%; Score 255.5;
Similarity 22.7%; Pred. No. 5e-:
99; Conservative 65; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VCDDYITEKFWRP-LKLGVVPVYYGSPSITDWLPSNKSAILVSBFSHPRBLASYIRRLDS 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIRLQEKGLPPKRWEA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NSKREDFVKKLQKHLQIDIYGGCGPMKCARGDSKCDTMLDTD-----YHFYVTFENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NKTAYMEYFEWRHDYKVVFLDGSHHDVL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEPFDVEEVLTSSDIKLEERMTATVIPGQKRLILSWNAGHSQDNLQG-CPDWNCEFTQVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IYAPISKSEQKDWKEGEIELSNDHELDVPILQKEELKPQQRPSFEENVPKKKTFNFNPVG 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -DYINMTLGF-RHD-TPAGSPYGYTVKLGAKSRKTGQVVDANLVNGKAKGAAWFVSHCQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ARAPDADAVLIAHMDN - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ICEDYVTEKLWKSGYQNTIIPLVLKRKLVEPFVPPN-SFIAIDDFKSVKEMGDYLNYLMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----TYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAV-FHEESPKNNYKLFHKPV 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       53/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133/1; 195/3; 242/3; 277/3; 307/2; 342/3; 382/2
  . 68
  Score
  251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -DFVPKP----NQYVVYFSQESPANSGIQIPRP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.5; DB 2;
. 5e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---LWWSPLTGETGRLGQCGADACFFTINR
                                                                                                                                                                                                     PIDN:AAC50190.1; PID:g967199
  띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       173;
  2;
Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 451;
  364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CQVCRMAWT 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                     genes in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 208
                                                                                                                                                                                                                                                                                                                                                        norma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:M81485; NID:g182490; PIDN:AAA98117.1; PID:g1280209
A;Note: sequence extracted from NCBI backbone (NCBIN:82825, NCBIP:82826)
R;Cameron, H.S.; Szczepaniak, D.; Weston, B.W.
J. Biol. Chem. 270, 20112-20122, 1995
A;Title: Expression of human chromosome 19p alpha(1,3)-fucosyltransferase genes
A;Reference number: 139043; MUID:95378269; PMID:7650030
A;Accession: 139046
                                                                                                                                                                                                A;Cross-references: GDB:131644; OMIM:136835
A;Map position: 19p13.3-19p13.3
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
                                                                                                                                                                                                                                                                                                                     A,Molecule type: mRNĀ
A,Residues: 1-374 <RE2>
A,Cross-references: EMBL:U27330; NID:g967196; PIDN:AAC50189.1; PID:g967197
  멍
                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                A; Cross-references:
A; Accession: I39047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-374 <WES>
                                                                                                                                                                                                                                                                             A; Gene: GDB: FUTS
                                                                                                                                                                                                                                                                                                     C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-374 < RES >
                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                              A;Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                  Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194
                                             90
  78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL: U27329; NID: g967194; PIDN: AAC50188.1; PID: g967195
```

```
87 SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYGT 134
                                                               NALEAWAVPVVLG-PSRSNYERFLPPD-AFTHVDDFQSPKDLARYLQELDKDHARYLSYF 319
EWKLKGEISNORLLTALRER -- KWGVQDVNQDNYIDAFECMVCTKVWANIRLQEK 411
                                                                                                                    -PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYV 358
                                                                                                                                                                                             AHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLWR
                                                                                                                                                                                                                                                      TYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR 302
                                                                                                                                                                                                                                                                                                                     SDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSLQ 213
                                                                                                                                                                                                                                                                                                                                                                          ESIEVIKSLRYLVP------LOSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELM 242
                                                                                                                                                                                                                                                                                                                                                                                                                                            S---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DENIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYL 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIPLILLWIWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE---VMYNP 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.3e-12;
ches 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98;
                                                                                                                                                                                                                                                                                                                                                                                                                                            -LTMSYR 159
                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
```

RESULT 6
A42270
alpha (1,3) fucosyltransferase FUT5 - human
N,Alternate names: fucosyltransferase 5
()Species: Homo sapiens (man)
C,Date: 31-Dec.193 #sequence revision 31-Dec.1993 #text_change 29-Sep-1999
C,Paccession: A42270; I39046; I39047
R,Weston, B.W.; Nair, R.P.; Larsen, R.D.; Lowe, J.B.
J. Biol. Chem. 267, 4152-4160, 1992
A,Title: Isolation of a novel human alpha (1,3) fucosyltransferase gene and molecular genes encoding enzymes with distinct acceptor substrate specificities.
A,Reference number: A42270; MUID:92156161; PMID:1740457
A,Recession: A42270

in g

9,4%; Score 245.5; DB 2 Pred. No. 2.3e-11; 2; Mismatches 117 DB 2; Length

IMLWWSPLTGETGRLGQC-----GADACFFTINRT-----Conservative 42; Indels -YLHHHMTKAFLFYGTDFN 101; Gaps

137 133

```
R;Johnson, D.

submitted to the EMBL Data Library, May 1997
A;Description: The sequence of C. elegans cosmid F59E12.
A;Reference number: Z18318
A;Accession: T15270
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues; 1-414 <JOHs
A;Cross-references: EMBL:AF003386; NID:g2088833; PID:g2088845; PIDN:AAB54261.1;
A;Cross-references: EMBL:AF003386; NID:g2088833; PID:g2088845; PIDN:AAB54261.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Map position: 2
A; Introns: 90/3; 237/2; C; Superfamily: calcate
                                                                      A;Cross-references: GB:L01698; NID:g182792; PIDN:AAB03078.1; PID:g1280210 R;Koszdin, K.L.; Bowen, B.R. Biochem. Blophys. Res. Commun. 187, 152-157, 1992 A;Title: The cloning and expression of a human alpha-1,3 fucosyltransferase capable of A;Reference number: JC1228; MUID:92392318; PMID:1520296 A;Accession: JC1228
                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-359 < WI
                                                                                                                                                                                                                                                                                        l sialyl Lewis x epitopes.
A;Reference number: A45156; MUID:93077550; PMID:1339443
                                                                                                                                                                                                                                                                                                                                          C;Species: Homo sapiens (man)
C;Date: 26-May-1994 #sequence revision 26-May-1994 #text change 29-Sep-1999
C;Accession: A45156; JC1228; J39050; J39051; J39052; J39053; J39054
R;Weston, B.W.; Smith, P.L.; Kelly, R.J.; Lowe, J.B.
J. Biol. Chem. 267, 24575-24584, 1992
A;Title: Molecular cloning of a fourth member of a human alpha(1,3)fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  βb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
A;Cross-references: GB:M98825; NID:g182491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                           A; Accession: A45156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics:
A; Gene: CESP: F59E12.13
                       ;Molecule type: mRNA
;Residues: 1-359 <KOS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Introns: 90/3; 237/2; 279/3; 309/2; 339/2; 388/3 Superfamily: galactoside 3(4)-L-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 105 GQCG--ADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLFRKAHHDWAVFHEESFKNN 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54 DG-HTKMEEAPTHLNSFLKKE--GLTFNR---KRKWELDSYPIMLWWSPLTGET---GRL
                                                                                                                                                                                                                         1-359 <WES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SAPWNAPGYRNGL-CRVCELLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWG 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YVQP----KRLVKTMKGIFGLISNCHTKSKRELALQELGKHINVTIGGKCASD----DRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQL 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDCPGLTDRCVIDTNRHQL--DSADAVVFHAADISKFPLPVSRKPDQIFVFNSMETPDNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DGSHVPIHRPQRHLYLTVSQDRIGSRFGKLAPKR-----ILYWTTIFGATVPSTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VQDVNQDNYIDAFECMVCTKVW 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KSICPAGVEC---IDVFEQYPFYIAIENTVCNDYVTEKIWSRITVPSIPIVMRRRVYQNI 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRFAVPGFKINVLNMKPIYLDGFFNWTSTHLYSSDAIHKYGTFLIPTQIAESRGFKVQSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YK------LFHKPVIT--LFNYTAT----FSRHSHLPLTTQYLESIEVLKSLR 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPP-KSFIAMDDYKNPSEMANHLRSLEANSTAYGEYFEWRQKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10.6%; Score 279; DB 2; Length 414; 25.4%; Pred. No. 6.6e-14; rative 62; Mismatches 153; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     376
PIDN: AAA99222.1;
PID:g182492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSPDB:GN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lewis.
                                                                                                                                                                                                                                                                                                                                               ıΩ
```

```
hypothetical protein KO8F8.3 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T23491 R;Smye, R.
                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-359 <RES>
A;Cross-references: EMBL:U27333; NID:g967202; PIDN:AAC50192.1;
A;Accession: 139051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Note: the authors translated the codon GAC for residue 219 as Asn R;Cameron, H.S.; Szczepaniak, D.; Weston, B.W. J. Biol. Chem. 270, 20112-20122, 1995
J. Biol. Chem. 270, 20112-20122, 1995
A;Title: Expression of human chromosome 19p alpha(1,3)-fucosyltransferase genes A;Reference number: I39043; MUID:95378269; PMID:7650030
A;Accession: I39050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GDB:135180; OMIM:136836
A;Map position: 19p13.3-19p13.3
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
C;Keywords: glycosyltransferase; hexosyltransferase
                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-359 <RE5>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: mRNA
A;Residues: 1-359 <RE4>
A;Cross-references: EMBL:U27336; NID:g967208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-359 <RE3>
A;Cross-references: EMBL:U27335; NID:g967206; PIDN:AAC50194.1; PID:g967207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:U27334; NID:g967204; A;Accession: I39052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: GDB:FUT6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:U27337; NID:g967210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Accession: I39054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Accession: I39053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Residues: 1-359 <RE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      preliminary
                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                                              302
                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159 RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116 PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN------LTMSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134 TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87 SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10.0%; Score 263; DB 2; Similarity 27.4%; Pred. No. 9.5e-13;
                                                                                                                                                                                                                                  FRWR
                                                                                                                                                                                                                                                                         VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGL 413
                                                                                                                                                                                                                                                                                                                          RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY
                                                                                                                                                                                                                                                                                                                                                                            R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                                                                                                                                                                                             QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIPLILLWIWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                  -ETLRPRSFSWAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIDN:AAC50196.1; PID:g967211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIDN:AAC50195.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN:AAC50193.1; PID:g967205
                                                                                                                                                                                                                               -AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PID: 9967209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PID: 9967203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                               318
                                                                                                                                                                                                                                                                                                                                                                                                                             260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in norma
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 282.5
279)
263
263
255.5
263
255.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
239.5
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR_78:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-080-960-2
2625
1 MKVTGPPQGVTDSMQCFNDQ.....LVDRNQNFSSQEFWGLVFKD 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      September 9, 2004, 21:39:06; Search time 42 Seconds
(without alignments)
1113.073 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283366 segs, 96191526 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 0.5
                                                    GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd
 DB
                                                                                                                                                                                   C64567
C64601
G71862
                                                                                                                                                                                                                                                                                                              A36669
H96742
A54057
B36340
A57596
JC4591
                                                                        D86171
F85077
S64140
T09882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H
                                                                                                                                                                   B71914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A45156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283366
                                                                                                                                                                                                                                                                                                                                hypothetical prote
alpha(1,3)-fucosyl
alpha(1,3)-fucosyl
alpha-1,3-fucosylt
                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical prote
alpha-(1,3)-fucosy
hypothetical prote
alpha (1,3) fucosy
alpha (1,3) fucosy
3-alpha-galactosyl
genome polyprotein
genome polyprotein
hypothetical prote
alpha-(1,3)-fucosy
                                                                                                                                              alpha-(1,3)-fucosy
alpha (1,3)-fucosy
AMP deaminase homo
                                                                                                                                                                                                                                                                           probable fucosyltr alpha (1,3) fucosy
                                                                      probable transposo hypothetical prote heat shock protein
                                                                                                                                                                                                                    hypothetical prote hypothetical prote fucosyltransferase
                                                                                                                                                                                                                                                                                                                alpha-1,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alpha(1,3/4)-fucos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                              hypothetical prote
                                                                                                                                                                                                     fucosyltransferase
                                                                                                                                                                                                                                                                                                                fucosylt
                                                                      RESULT 2
T15270
hypothetical protein F59E12.13 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 20-Sep-199 #sequence_revision 20-Sep-1999 #text_change 17-Mar-2000 C;Accession: T15270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         alpha(1,3/4)-fucosyltransferase - bovine C;Species: Bos primigenius taurus (cattle) C;Species: Bos primigenius taurus (cattle) C;Aute: 01-Aug-1995 #sequence_revision 01-Sep-1995 #text_change 13-Sep-1998 C;Accession: A55498 R;Oulmouden, A; Wierinckx, A; Petit, J.M.; Julien, R. submitted to the EMBL Data Library, June 1995 submitted to the EMBL Data Library, June 1995 A;Description: Molecular Cloning and expression of bovine alpha (1,3/4)-fucosyltransf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
S55498
                                                                                                                                                                         :5
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Reference number: S55498
A; Accession: S55498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                229
                                                                                                                                                                                                                                                                                                                                                                       176
                                                                                                                                                                                                                                                                                                                                                                                                                                               126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
```

105.5 4.0 964 2 T01860 reverse transcript 104 4.0 937 2 S39558 lantibiotic nisin 103 3.9 979 2 T41006 1103 3.9 2103 1 JQ1621 1102.5 3.9 650 2 G70169 heat shock protein 101.5 3.9 2330 2 T26836 heat shock protein 101.5 3.8 324 2 AH1879 hypothetical protein 100.5 3.8 533 2 B82446 virz protein (impor 100.5 3.8 789 2 G90587 hypothetical protein 100.5 3.8 1411 2 S55123 hypothetical protein 100.5 3.8 1411 2 T38996 hypothetical protein 100 3.8 2253 2 T30336 hypothetical protein 100 3.8 2253 2 T30336 valy1-trnn synthet 100 3.8 2253 2 T30336 hypothetical protein 100 3.8 625 2 T3274 dynein heavy chain 99 3.8 653 2 B81277 hypothetical protein	45	44	43	42	41	40	39	38	37	36	ω 5	34	ω ω	32	31	30
.0 964 2 T01860 reverse tran .0 817 2 S39558 HS990 homolo .0 993 2 C31915 lantibiotic .0 997 2 T41006 .9 979 2	99	99.5	100	100	100.5	100.5	100.5	100.5	101	101.5	102.5	103	103	104	104	105.5
2 T01860 reverse tran 2 S39558 HS990 homolo 2 C31915 lantibiotic 2 C31916 ubiquitin ca 2 T41006 genome polyy 2 G70169 heat shock polythetical 3 T26836 hypothetical 4 RH1879 hypothetical 5 RB6446 virE2 protein 6 G90587 hypothetical 7 T38996 hypothetical 7 T38996 virE2 protein	3. 8	3.8	3.8	3. 8	3.8	3. ₈	ა	ა . გ	3. 8	ა 9	3.9	3.9	3.9	4.0	4.0	4.0
T01860 reverse tran 339558 HSP90 homolo C31915 lantibiotic C31915 lantibiotic C31916 ubiquitin ca J01621 genome poly G70169 heat shock p T26836 hypothetical AH1879 virE2 protes B26446 lipoprotein T38996 yord T38996 hypothetical S55123 hypothetical S55123 hypothetical S55123 hypothetical C30336 nuclear/mitc T43274 dynein heavy B81277 hypothetical	653	4196	2253	842	1411	862	789	533	324	2330	650	2103	979	993	817	964
HSP90 homolo lantibiotic lantibiotic ubiquitin ca genome polyr heat shock p hypothetical hypothetical ipoprotein hypothetical hypothetical hypothetical hypothetical hypothetical hypothetical hypothetical hypothetical valy1-tRNA c nuclear/mitc dynein heavy hypothetical	N	N	N	N	N	N	N	N	N	Ŋ	N	j-4	N	N	N	N
reverse trans HSP90 homolog lantibiotic i ubiquitin can genome polyp- heat shock polyp- heat shock pote- hypothetical hypothetical hypothetical hypothetical lipoprotein hypothetical hypothetical valyl-tRNA s nuclear/mitoi dynein heavy hypothetical	B81277	T43274	T30336	D90240	855123	T38996	G90587	B26446	AH1879	T26836	G70169	JQ1621	T41006	C31915	S39558	T01860
script y - Ma nisin nisin rotein rotein rotein rotein prote	hypoth	dynein	nuclear	valyl-t	hypother	hypothet	lipoprot	virE2 pro	hypotheti	hypotheti	heat show	genome po	ubiquitin	lantibiot	HSP90 hom	reverse t

ALIGNMENTS

```
A;Nolecule type: DNA
A;Residues: 1-365 <OUL>
A;Residues: 1-365 <OUL>
A;Cross-references: EMBL;X87810; NID:g860807; PID:g860808
C;Superfamily: galactoside 3(4)-L-fucosyltransferase
328 ---ETLRPRSF-----SWALMFCKACW---KLQQE 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                         193 LESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGE 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133 GTDFNIDSLPLPRKAHHDWAVFHEESPKONYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69 VLLWTWPF-NOPVALSRCSELWPGTADCQLTVNRSEYPQADAVFVHHREVSHRPKMQL-- 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90 IMLWWSPLTGETGRLGQC-----GADACFFTINRT-----YLHH----HMTKAFLFY 132
                                                               RLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEK 411
                                                                                                                                 VLGPSRVNYEQFLPP-KAFIHVEDFQSPKDLAQYLLALDKDYASYLNYERWR-----
                                                                                                                                                                                                    YYGSPSIT--DWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ 369
                                                                                                                                                                                                                                                                       F--HTPLPHAL------MAKQLSQYKFYLAFENSLHPDYITEKLWKNALQAWAVPV
                                                                                                                                                                                                                                                                                                                                  CLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPV 311
                                                                                                                                                                                                                                                                                                                                                                                                                    LEPWP-SQPVETILNISAKTKL-----VAWVVSNWNTDSIRVQYYKLLKPHLQVDVYGR 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----PPSPRPADQRWVWFSMESPSNCLKL--KDLDGYFNLTMSYRRDSDIFMPYGW 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10.8%; Score 282.5; DB 2; 28.4%; Pred. No. 3e-14; tive 49; Mismatches 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

This Page Blank (uspto)

```
RESULT 15
AAY8096
ID AAY80
XX AAY80
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 10.6%; Score 278.5; DB 3; Best Local Similarity 27.2%; Pred. No. 1.9e-19; Matches 99; Conservative 62; Mismatches 120;
                                                                                                           Alpha 1,3-fucosyltransferase generating Lewis x but not sialyl-Lewis epitope and an antibody recognizing it useful for diagnosis of brain kidney disease and cancer.
                                                                                                                                                                                                                                                                                                 Narimatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                       (KYOW ) KYOWA HAKKO KOGYO KK
                                                                                                                                                                                                                                                                                                                                                                                                             29-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200006708-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diagnosis; treatment; cancer; human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         brain; kidney; recombinant exp;
knockout animal; FUC-TIV; drug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alpha-1,3-fucosyltransferase; fucose; glycosylation; Lewis epitope; brain; kidney; recombinant expression; transgenic animal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human alpha-1,3-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY80996 standard; protein; 359
                                                                                                                                                                                                                  2000-183120/16.
DB; AAZ92646, AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAH----HDWAVFHEESPKNNYKLFHKP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MESA----SSVLKMKNF-FSTKTDY-FNETTILVWVWPF-GQTFDLTSCQAMFNIQGCHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WNPEHARVKYYNELSKSIEIHTYGQAFGEYVNDKNL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGIEHLFHUTLTYRRDSDIQVPYGFL----TVSTNPFVFEVPSKEKL-----VCWVVSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --VITLENYTATESRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CIKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AKYLKEVDKNNKLYLSYFNWR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQD--VNQDNYIDAFECMV 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDPPSDRDSYVRELMTYIEVDSY----GECLRNKDLPQQLKNPASMDADGFYRIIAQYKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTDRSL--YNKSHAVLIHHRDISWDLTNLPQQARPPFQKWIWMNLESPT----HTPQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGA----DACFF
                                                                                                                                                                                                                                                                                                 Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                 Kudo T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                             98JP-00213823
                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-JP004092
                                                                                                                                                                                                                    AAZ92647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry
                                                                                                                                                                                                                                                                                                    Sasaki
                                                                                                                                                                                                                                                                                                 ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         screening; inhibitor; potentiator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---KDFTVNLPRFWESHACLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---IPTISTCKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83;
                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
```

Ş

Ś

```
밁
                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유 &
                                                                                                                                                                                      밁
                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC transfers a fucose moiety to galactosyl-beta-1-4-N-acetylglucosamine (C (generating the Lewis x or y epitope). It does not transfer a fucose content to alpha-2,3-sialyl-galactosyl-beta-1-4-N-acetylglucosamine and therefore does not generate the sialyl-Lewis x epitope. The invention (C also relates to DNA sequences encoding alpha-1,3- fucosyltransferase and c expression vectors and host cells comprising these DNA sequences. The c (invention additionally encompasses the preparation of alpha-1,3- fucosyltransferase via the culture of transformed cells or by expression cof the protein in a transgenic animal, antibodies which recognise alpha-1,3-fucosyltransferase, methods for screening potential inhibitors or preparation of compounds having fucose-containing sugar chains by use of the protein; and knockout non-human animals lacking alpha-1,3- fucosyltransferase has a similar substrate crange to the known fUC-TIV and is expressed mainly in brain and kidney c tissues. Alpha-1,3-fucosyltransferase may be used for the treatment and cidiagnosis of diseases of the brain and kidney, and of cancers. They may be used for the identification of substances which affect the activity or expression of alpha-1,3-fucosyltransferase; such substances may be used to the activity or expression of alpha-1,3-fucosyltransferase; such substances may be used to study the mechanisms of action and expression of alpha-1,3-fucosyltransferase. They may be used to study the mechanisms of action and expression of alpha-1,3-fucosyltransferase. The present of action and expression of alpha-1,3-fucosyltransferase. The present content is a sequence represents human alpha-1,3-fucosyltransferase. The present content is a sequence represents human alpha-1,3-fucosyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                399
                                                                                             299
                                                                                                                                                                                                                                      284
                                                                                                                                                                                                                                                                                                                                                                                  146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 MESA----SSVLKMKNF-FSTKTDY-FNETTILVWVWPF-GQTFDLTSCQAMENIQGCHL 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59 MEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGA----DACFF 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359
                                                CTKV 402
                                                                                             AKYLKEVDKNNKLYLSYFNWR----
                                                                                                                                        ASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQD--VNQDNYIDAFECMV 398
                                                                                                                                                                                           YLSFENSIHKDYITEKLYNAFLAGSVPVVLG-PSRENYENYIPAD-SFIHVEDYNSPSEL
                                                                                                                                                                                                                                    ILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPS----ITDWLPSNKSAILVSEFSHPREL 340
                                                                                                                                                                                                                                                                                       WNPEHARVKYYNELSKSIEIHTYGQAFGEYVNDKNL-
                                                                                                                                                                                                                                                                                                                                  CDPPSDRDSYVRELMTYIEVDSY----GECLRNKDLPQQLKNPASMDADGFYRIIAQYKF 283
                                                                                                                                                                                                                                                                                                                                                                                  SGIEHLFNLTLTYRRDSDIQVPYGFL----TVSTNPFVFEVPSKEKL-----VCWVVSN
                                                                                                                                                                                                                                                                                                                                                                                                                                --VITLENYTATESRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSD 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTDRSL--YNKSHAVLIHHRDISWDLTNLPQQARPPFQKWIWMNLESPT-----HTPQK 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAH---HDWAVFHEESPKNNYKLFHKP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10.5%; Score 275.5; DB 3; 26.9%; Pred. No. 3.9e-19; rative 63; Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                KDFTVNLPRFWESHACLA 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359;
                                                                                                                                                                                                                                                                                         ---IPTISACKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                       240
```

Search completed: September Job time: 130 secs 9 2004, 21:44:02

338

CDHV

The invention relates to a novel alpha-1,3-fucosyltransferase which

2.

124-127; 172pp;

멼

188 LDSLKHREWGVND 200

```
RESULT 13
ABB62750
ID ABB62750
XX ABB62750
AC ABB62
XX ABB62
XX Drose
XX Dr
                                                Ş
                                                                                                                    B
                                                                                                                                                                 δ
                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL01676-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57377-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated nucleic acid genes from Drosophila and interactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 15042; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2000; 2000US-0191637P
11-JUL-2000; 2000US-00614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-MAR-2001; 2001WO-US009231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABB62750 standard; protein; 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 525 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pharmaceutical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Drosophila melanogaster polypeptide SEQ ID NO 15042.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABB62750;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (PEKE ) PE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-656860/75.
363
                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                            253
                                                                                                                                                                                                                                                                                                                                                                                                                           106
                                                          259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABL06853.
                                                       LPQQLKNPASMDADGFYRII-AQYKFILAFENAVCDDYITEKFW-RPLKLGVVPVYYGS- 315
                                                                                                                                                                           LVYVQSDCDPPSDRDSYVRELMTYIE-------
                                                                                                                                                                                                                                         QNVKVPDAINWTATYRRDSTIVAPYEKWQYYDTKVQQQEQDINY----SVNKTKK----
                                                                                                                                                                                                                                                                                                                                                                                                                           QCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKL 165
                                                                                                                    VAWFVSNCGARNGRLQYAHELQXYIEVWIIYHKTVVQYSNVLYWVFPQVDIYGACGNFK-
                                                                                                                                                                                                                                                                                                      FHKPVITLFNYTATFSRHSHLPL---TTQYLES--IEVLKSLRYLVPLQSKNKLRKRLAP 220
                                                                                                                                                                                                                                                                                                                                                                 KCPVDTCELTANRDLA---STADMILYKDHYIPTGIRRPSNSKQVSMLYYLECP---YHT 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
---CSRSTADKCFEILDNDYKFYLAFENSNCKDYITEKFFVNALNRRVLPIVMGAR 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           닯
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      detection reagent for detecting 1000 or more for elucidating cell signaling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 279.5; DB 4; Pred. No. 2.7e-19; 44; Mismatches 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H
W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   525;
                                                                                                                                                                              VDSYGECLRNKD 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                    362
                                                                                                                                                                                                                                            303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                  CC transfers a fucose moiety to galactosyl-beta-1-4-N-acetylglucosamine moiety to galactosyl-beta-1-4-N-acetylglucosamine complete to alpha-2,3-sialyl-galactosyl-beta-1-4-N-acetylglucosamine and therefore does not generate the sialyl-Lewis x epitope. The invention complete the sialyl-Lewis x epitope. The invention complete to DNA sequences encoding alpha-1,3-fucosyltransferase and compression vectors and host cells comprising these DNA sequences. The invention complete the propagases the preparation of alpha-1,3-fucosyltransferase via the culture of transformed cells or by expression complete the protein in a transgenic animal, antibodies which recognise alpha-1,3-fucosyltransferase, methods for screening potential inhibitors or compounds having fucose-containing sugar chains by use of the protein, and knockout non-human animals lacking alpha-1,3-fucosyltransferase has a similar substrate fucosyltransferase. Alpha-1,3-fucosyltransferase has a similar substrate fucosyltransferase, nucleorides which encode it, antibodies, potentiators and inhibitors may be used for the treatment and diagnosis of diseases of the brain and kidney, and of cancers. They may complete the activity or expression of alpha-1,3-fucosyltransferase, such substances may be used to study the mechanisms of action and expression of alpha-1,3-fucosyltransferase. The present may be used to study the mechanisms of action and expression of alpha-1,3-fucosyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alpha 1,3-fucosyltransferase generating Lewis epitope and an antibody recognizing it useful kidney disease and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alpha-1,3-fucosyltransferase; fucose; glycosylation; Lewis epitope; brain; kidney; recombinant expression; transgenic animal; knockout animal; FUC-TIV; drug screening; inhibitor; potentiator; diagnosis; treatment; cancer; murine; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Murine alpha-1,3-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY80995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY80995 standard; protein; 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 2; Page 121-124; 172pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAZ92645.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-183120/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Narimatsu H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200006708-A1
                                       sequence represents murine alpha-1,3-fucosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a novel alpha-1,3-fucosyltransferase which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (KYOW ) KYOWA HAKKO KOGYO KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ----RL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATLHNEEQLRKPRW----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LTA-----LRERKWGVQDVNQDNYIDAFECM----VC-TKVWANIRLQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEDYEVSAPRRSYTHVDEFSSPKELAEYLRILDHDDELYNSYFKWKGTGEFINTYYWCRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kudo T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98JP-00213823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-JP004092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sasaki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YTDLNDWWRGPGVCTTRSWRNFKARK 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x but not sialyl-Lewis x for diagnosis of brain and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    475
```

Sequence 359 AA.

06-SEP-2000; 08-SEP-2000; 08-SEP-2000;

12-SEP-2000; 14-SEP-2000; 14-SEP-2000;

```
Š
                                                            밁
                                                                                         δ
                                                                                                                                           밁
                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to the isolation of novel human enzyme copypeptides, and the cDNA (AAS40785-AAS41684) and genomic sequences concoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, concomprise the concoding them. The sequences of the invention are useful in the consortion transferases, transferases, hydrolases, lyases, concording the invention are useful in the concoding transferases of a wide range of consortion in the consortion are useful in the consortion in the consortion are useful in the consortion in the consortion are useful in the consortion in the consortion and/or prognosis of a wide range of consortion in the consortion in the consortion in the consortion and loss orders (e.g. AIDS) autoimmune disorders (e.g. cancer), consortion consortion (e.g. AIDS) autoimmune disorders (e.g. cancer), consortion consortion (e.g. atherosclerosis), blood-related disorders (e.g. atherosclerosis), blood-related disorders (e.g. atherosclerosis), blood-related disorders (e.g. influenza). The polynucleotides of the convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy. AAUZ2915-AAUZ3814 represent convention can also be used in gene therapy.
                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17.NOV-2000
17.NOV-2000
17.NOV-2000
17.NOV-2000
17.NOV-2000
17.NOV-2000
17.NOV-2000
17.NOV-2000
01.DEC-2000
05.DEC-2000
06.DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel polypeptides and polynucleotides useful for diagnosing, preventing treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HUMA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-465566/50.
DB; AAS41344.
                       372
                                                                                                    312
                                                                                                                                                                                                                                                                  195
                                                                                                                                           89
                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                          94;
                                                                                                                                                                                                                                                                                                       h 18.5%;
Similarity 48.7%;
94; Conservative 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HUMAN
LTALRERKWGVQD
                                                                                                                                                                                                                                                                                                                                                                                            225
                                                                                                                                           YRGSPSVRDWMPNNHSVILIDDFESPQKLÅEFIDFLDKNDEEYMKYLAYKQPGGITNQFL
                                                                                    YYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRL
                                                                                                                                                                                                                           STAVAAALELVDPPGCRNSARD--APLLYLQSHCDVPADRDRYVRELMRHIPVDSYGKCL
                                                                                                                                                                                                                                                                  SIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMIYIEVDSYGECL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 1470; 1180pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0249244P.
2000US-0249245P.
2000US-0249265P.
2000US-0249299P.
2000US-0249299P.
2000US-0249300P.
2000US-0250391P.
2000US-0251988P.
2000US-025179P.
2000US-0251866P.
2000US-0251866P.
2000US-0251869P.
                                                                                                                                                                                                                                                                                                                                                                                          Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruben
                                                                                                                                                                                                                                                                                                            38;
                                                                                                                                                                                                                                                                                                       Score 485.5; DB 4
Pred. No. 3.8e-41;
8; Mismatches 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English
                                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                          56:
                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                       ű
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                    311
                                                                 187
                                                                                                      371
                                                                                                                                             127
                                                                                                                                                                                                                             67
```

2000US-0230438P.
2000US-0231244P.
2000US-0231244P.
2000US-0231413P.
2000US-0231413P.
2000US-0232398P.
2000US-0233240P.
2000US-0233240P.
2000US-0233240P.
2000US-0233240P.
2000US-0233422P.
2000US-0233423P.
2000US-0234223P.
2000US-0234223P.
2000US-0234239P.
2000US-0234239P.
2000US-023423P.
2000US-023428P.
2000US-023484P.
2000US-0235836P.
2000US-023636P.
2000US-023636P.
2000US-023637P.
2000US-023637P.
2000US-023637P.
2000US-023637P.
2000US-02467P.
2000US-02467P.
2000US-024677P.
2000US-024647P.
2000US-024652P.
2000US-024652P.
2000US-024653P.
2000US-024661P.
2000US-024661P.
2000US-024661P.

14-SEP-2000
14-SEP-2000
14-SEP-2000
14-SEP-2000
14-SEP-2000
21-SEP-2000
25-SEP-2000
25-SEP-2000
27-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
20-OCT-2000
02-OCT-2000
03-NOV-2000
03-NOV-2000
03-NOV-2000
03-NOV-2000
08-NOV-2000
01-NOV-2000

```
Ş
                                                                                             밁
                                                                                                                                  Š
                                                                                                                                                                                          B
                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      thyroidthis, lugus, erythematosus, insulin dependent diabetes mellittis; chisorders of inflammation e.g. nephritis, ischaemia-reperfusion injury, conference of inflammation e.g. nephritis, ischaemia-reperfusion injury, cardiovascular disease.

CC cardiovascular disease e.g. cardiovascular abnormalities, persistent truncus arteriosus, arrhythmias, angina pectoris, myocardial infarction, hyperrension, telangiectasia, ischaemia includes cerebral ischaemia, chyperrension, telangiectasia, ischaemia includes cerebral ischaemia, chyperrension, telangiectasia, ischaemia includes cerebral ischaemia, chucato with neovascularisation, cancers which involve angiogensis, benign tumours, ocular angiogenic diseases, hyperproliferative disorders, chistic retinopathy, uveitis, rheumatoid arthritis, psoriasis, delayed wound healing, endometriosis, vasculogenesis, atherosclerosis; nervous system diseases, degeneration associated with Parkinson's disease.

C Alzheimer's disease and infectious diseases. This is the amino acid content of the content of the content of the invention of the content of the cont
                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human secreted proteins useful for treating immune system e.g. anemia, cardiovascular e.g. myocardial infarction, neurological disorders e.g. Alzheimer's disease, Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and the polynucleotides encoding them are useful for treating, disorder including disorders of immune system e.g. immunologic deficiency syndrome, attaxia telangiectasia, HIV infection (human immunodeficiency virus), Wiskott-Aldrich disorder, anaemia, thyrombocytopenia, heart attacks (infarction), strokes, or scarring; autoimmune diseases e.g. Addison's disease, encephalomyelliis, multiple sclerosis, autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 330; 337pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-AUG-2000; 2000US-0225215P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-AUG-2001; 2001WO-US025288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200214341-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention describes eight
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-257592/30.
DB; ABK11711.
181
                                             414
                                                                                                                                                                                                                                                                                                                                                 242
                                                                                               121
                                                                                                                                                                                                                                               299
                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                 MTYIEVDSYGECLRNKDLP-QQLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITE
                                             PP--KRWEAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRN
                                                                                                                               EWKLKGEISNQRLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGL 413
                                                                                                                                                                                                  KLWRPMHLGAVPVYRGSPSVRDWMPNNHSVILIDDFESPQKLAEFIDFLDKNDEEYMKYL
                                                                                                                                                                                                                                                                                               MRHIPVDSYGKCLQNRELPTARLQDTATATTEDPELLAFLSRYKFHLALENAI CNDYMTE
SPVFEPHIAQPSHMDCPVPTPGFGNVEEIPENDSWKEMWLQDYWQGLDQGEALTAMIHNN
                                                                                               AYKQPGGITNQFLLDSLKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAASPGD
                                                                                                                                                                                                                                          KFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYV 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ni J,
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Signal_peptide
2. .261
/label= mature_secreted_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                              18.6%; Score 487.5; DB 39.4%; Pred. No. 3e-41; tive 51; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               novel human secreted polypeptides ing them are useful for treating, o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shi
                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                    , 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         K
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 261;
                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disorders
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (I)
                                                                                                                                                                                                  120
240
                                               471
                                                                                               180
                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                    ທ
```

```
RESULT 12

AAU23474

ID AAU23

XX AAU23

XX Human

XX Human

XX Human

XX Human

XX Hoold

XX Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-MAR-2000; 2000US-013076F; 18-APR-2000; 2000US-0198123F; 19-MAY-2000; 2000US-0209467F; 28-UNN-2000; 2000US-021647F; 207-UNL-2000; 2000US-0216647F; 207-UNL-2000; 2000US-0216647F; 207-UNL-2000; 2000US-0217496F; 207-UNL-2000; 2000US-0217496F; 207-UNL-2000; 2000US-0217496F; 207-UNL-2000; 2000US-0217496F; 207-UNL-2000; 2000US-0217496F; 207-UNL-2000; 2000US-0218290F; 26-UNL-2000; 2000US-022964F; 26-UNL-2000; 2000US-022964F; 207-2000; 2000US-0229518F; 207-2000; 2000US-0229514F; 207-2000; 2000US-0225214F; 207-2000; 2000US-0225266F; 207-2000; 2000US-0225267F; 207-2000; 2000US-0225268F; 207-2000; 2000US-0225270F; 207-2000US-0225270F; 207-2000US-0225270F; 207-2000US-0225270F; 207-2000US-0225270F; 207-2000US-02252757F; 207-2000US-02252757F; 207-2000US-02252757F; 207-2000US-02252757F; 207-2000US-02252758F; 207-200
14-AUG-2000;
14-AUG-2000;
14-AUG-2000;
218-AUG-2000;
22-AUG-2000;
22-AUG-2000;
23-AUG-2000;
30-AUG-2000;
01-SEP-2000;
01-SEP-2000;
01-SEP-2000;
01-SEP-2000;
01-SEP-2000;
05-SEP-2000;
05-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-FEB-2000;
02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
18-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase; ligase; hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; infectious disorder; cytostatic; anti arthritic; nephrotropic; anticoagulant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU23474 standard; protein; 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JAN-2001; 2001WO-US001239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200155301-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel human enzyme polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 ET-EQTKFW 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   472 QNFSSQEFW
                                        2000US-0227182P.
2000US-0227009P.
2000US-0228928P.
2000US-0229287P.
2000US-0229343P.
2000US-0229344P.
2000US-0229344P.
2000US-0229509P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0179065P.
2000US-0180628P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                  2000US-0225759P.
2000US-0226279P.
2000US-0226681P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0184664P.
2000US-0186350P.
2000US-0189874P.
                                                                                                                                                                                                                                                                                                                                                         2000US-0226868P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #560
```

```
21-SEP-2000
21-SEP-2000
21-SEP-2000
25-SEP-2000
27-SEP-2000
29-SEP-2000
                                 Claim
The invention describes an isolated nucleic acid molecule comprising a sequence encoding musculoskeletal system associated polypeptides useful for detecting disorders, e.g., cancer or cancer metastases, in animals
                                                Isolated nucleic acid molecules associated polypeptides, useful
                                                                                                                   (ROSE/)
(RUBE/)
(BARA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-JAN-2001;
                                                                                   2003-128199/12
                                                                                              Ç,
                                 11;
                                                                                                                  ROSEN C
RUBEN S
BARASH
                                 SEQ
                                                                                                    Ruben SM,
                                                                                                                                                  2000US-022686BP.
2000US-0229349P.
2000US-0229344P.
2000US-0229349P.
2000US-0229349P.
2000US-0231413P.
2000US-0234274P.
2000US-023493P.
2000US-023493P.
2000US-023493P.
2000US-023636P.
2000US-023636P.
2000US-023636P.
2000US-023637P.
2000US-0237039P.
2000US-0241785P.
2000US-0241785P.
2000US-0241785P.
2000US-0241785P.
2000US-0241785P.
2000US-0241785P.
2000US-0241866P.
                                                                                                                   C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001US-00764877
                                 Ħ
                                 g
                                 1210;
                               321pp;
                                                encoding musculoskeletal system for detecting disorders, e.g. cancer.
                               English
```

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC and other cardiovascular conditions; treats wounds due to injuries, can and limb regenerative tissue repair, and ulcers; stimulates angiogenesis cc and limb regeneration; stimulates neuronal growth; can treat and prevent cc endance bone as, Alzheimer's disease, Parkinson's disease, and AIDS-crelated complex; stimulates chondrocyte growth, thus they can be used to conditions, such as, Alzheimer's disease, Parkinson's disease, and AIDS-crelated complex; stimulates chondrocyte growth, thus they can be used to conditions, such as periodontal regeneration and aid in tissue transports or combination periodontal regeneration and aid in tissue transports or combination with other cytoxines; maintains organs before transplantation or for supporting cell culture of primary tissues; conduces tissue of mesodermal origin to differentiate in early embryos; components could be subjected to component the surgery); modulates mammalian metabolism; changes mammalian components countries of physical state by influencing biorhythms, caricadic rhythms, carcadac rythms, for violence, tolerance for pain, reproductive capabilities, hormonal or endocrine levels, appetite, libido, memory, or stress; increases or decreases storage capabilities, fat content, lipid, components. This is the amino acid sequence of a novel human conductive conductive storage that directly from the US patent office at the sequence data for this patent of the printed specification, but was obtained in celectronic format directly from the US patent office at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                       05-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                      AAU77731
                                                                                                                                                                                                                                                                        Nove1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   humans. The nucleic acid: stimulates re-vascularisation of ischaemic tissues associated with conditions such as thrombosis, arteriosclerosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100;
                                                                                                                                                                                                                                                                        human
                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 107
                                                                                                                                                                                                                                                                                                                                                                     standard; protein; 261 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 VRELMTY I EVDSYGECLRNKDLPQQLKNPASMDADGFYRIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSY 237
                                                                                                                                                                                                                                                                   secreted protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA,
                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 521; DB Pred. No. 2.5e.
1; Mismatches
                                                                                                                                                                                                                                                                       #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 6;
2.5e-45;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
```

KW Secreted protein; gene therapy; immunostimulant; human; stroke; kw immune system disorder; immunologic deficiency syndrome; anaemia; kw ataxia telangiectasia; HIV, human immunodeficiency virus; heart attack; kw Wiskott-Aldrich disorder; thyrombocycopenia; scarring; erythematosus; kw autoimmune disease; Addison's disease; ancephalomyelitis; lupus; wa mephritis; ischaemia; hypergammaglobulinaemia; Crohn's disease; kw sarcoidosis; Gaucher's disease; cardiovascular disease; telangiectasia; kw sarcoidosis; Gaucher's disease; cardiovascular disease; tumour; kw myocardial infarction; hypertension; neovascularisation; angiogensis; kw cancer; ocular angiogenic disease; hyperproliferative disorder; kw wound healing; endometriosis; vasculogenesis; atherosclerosis; wound healing; endometriosis; vasculogenesis; atherosclerosis; we revous system disease; Parkinson's disease; Alzheimer's disease;

```
02-OCT 2000 2000US-0237039F.
02-OCT 2000 2000US-0237040F.
13-OCT 2000 2000US-023937F.
20-OCT 2000 2000US-0241786F.
20-OCT 2000 2000US-0241786F.
20-OCT 2000 2000US-0241826F.
20-OCT 2000 2000US-0241886F.
20-OCT 2000 2000US-0246778F.
20-OCT 2000 2000US-02464778F.
20-OCT 2000 2000US-0246478F.
20-OCT 2000 2000US-0246478F.
20-OCT 2000 2000US-0246478F.
20-OCT 2000 2000US-0246528F.
20-OCT 2000 2000US-0249218F.
20-OCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; 2000US-0236369P.
; 2000US-0236370P.
; 2000US-0236802P.
; 2000US-0237037P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0236367P.
2000US-0236367P.
2000US-0236368P.
```

```
Rosen CA,
Barash
SC,
Ruben SM
```

US2002147140-A1

```
RESULT 10
ABU12557
ID ABU12557
AC ABU12
XX
AC ABU12
XX
AC ABU12
XX
AC ABU12
XX
Muscu
CH ALZhe
XW Wound
XW Wound
XW Limb
XW Wound
XW Himb
XW Chond
XW MISSU
XW Mellar
XW Mellar
XW Mellar
XW Mellar
XW Mellar
XW Tissu
XW mellar
XW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to novel genes (AAL34669-AAL37666) and proteins (ABB03097-ABB04109) associated with the musculoskeletal system useful for CC preventing, treating or ameliarating medical conditions e.g. by protein CC or gene therapy. The genes are isolated from a range of human tissues CC disclosed in the specification. The nucleic acids, proteins, antibodies CC and (ant)agonists are useful in the diagnosis, treatment and prevention CC of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the CC adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, CC lung, or urogenital; (b) immune disorders e.g. Addison's disease, CC allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, CC arthritis and ulcerative collitis, (c) cardiovascular disorders such as CC exeberal anoxia and epilepsy, and (f) infectious diseases such as viral, correctial, fungal and parasitic infections. Note: The sequence data for CC cotained in electronic format directly from WIPO at
                                                                                                                                                                            Musculoskeletal system antigen; cancer; metastasis; re-vascularisation; kW thrombosis; arteriosclerosis; mineral content; cardiovascular condition; wound; injury; burn; angiogenesis; ulcer; post-operative tissue repair; limb regeneration; neuronal growth; neurodegenerative tissue repair; which bregeneration; paratkinson's disease, AIDS-related complex; chondrocyte growth; bone regeneration; periodontal regeneration; wrissue transport; bone graft; skin aging; keratinocyte growth; hair loss; we melanocyte growth; cell proliferation; cell growth, organ transplant; which differentiation; body height; hair colour; eye colour; skin; we percentage of adipose tissue; pigmentation; cosmetic surgery; metabolism; whorhythm; caricadic rhythm; depression; tendency for violence, pain; we reproductive capability; hormone level; endocrine level; appetite; which is a protein content; carbohydrate content; vitamin content; cofactor content; protein content; carbohydrate content; vitamin content; cofactor content;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Sim
Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated polypeptide for treating, preventing and/ or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g. diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-451937/48.
N-PSDB; AAL34845.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 107 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; SEQ ID NO 1210; 781pp + Sequence Listing; English.
                                                                                                                                                        nutritional component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel human musculoskeletal system antigen #177.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABU12557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABU12557 standard; protein; 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238 VRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATFSRHSHLPLTTQYLBSIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIM 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 521; DB 4; Length 107; Pred. No. 2.5e-45; 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

Kable AE,

Gorvard AE

WO200155367-A1

```
ARBOULT ARBOUT A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to a new receptor and membrane-associated CC protein (REMAP). The polypeptide, polynucleotide and agonist are useful CC for treating a condition associated with decreased expression of CC functional REMAP. The antagonist is useful for treating a disease CC associated with overexpression of functional REMAP. The antagonist is useful for treating a disease associated with overexpression of functional REMAP. The antagonist is the expression of REMAP. These polypeptides, polynucleotides, agonists are particularly useful for diagnosing, treating or preventing cardiovascular (e.g. atherosclerosis, hypertension, aneurysms, CC congestive heart failure, angina pectoris, or ischaemic or rheumatic complysema or bronchitis) gastrointestinal (e.g. nausea, peptic ulcer or CC crohn's disease), lipid metabolism (e.g. Fabry's disease, diabetes CC mellitus or hyperlipidaemia), autoimmune/inflammatory (e.g. anaemia, CC asthma, gout, pancreatitis or Crohn's disease, neurological (e.g. CC dementia, stroke, Alzheimer's disease, Creutzfeldt-Jakob disease, CC multiple sclerosis, parkinson's disease, anxiety, schizophrenia or CC cushing's syndrome), endocrine or cell prollierative disorders (e.g. CC cushing's syndrome), endocrine or cell prollierative disorders (e.g. CC cancers including adenocarcinoma, leukaemia, lymphoma or REMAP CC sarcoma). The present amino acid sequence represents a human REMAP cc protein of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                               cardiant; gene therapy; cancer; i neurological disease; infection; musculoskeletal system.
                                                                                                                                                                                                                                                                                                                                                                                                                        T 9
                                                                                                                          Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; heparotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticorvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder
                                 Homo sapiens
                                                                                                                                                                                                                                                                                                  08-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                            ABB03263 standard; protein;
                                                                                                                                                                                                                                                  Human musculoskeletal system related polypeptide SEQ ID NO 1210.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 2; Page 180; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; ABS67785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New human receptor and membrane-associated proteins and polynucleotides, useful for diagnosing, treating or preventing cardiovascular disorders (e.g. aneurysms), neurological disorders (e.g. Parkinson's disease) or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-627559/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYG-TDFNIDSLPLPRKAHHDWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VCFLTTPDSTFELFARDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VFHEESPKNNYKLFHKPV 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WSPLTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYGLTTQKMGGRRYPPELPRAHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QVMVELGKFERKEFKSSSLQDGHTKMEEAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΑA,
                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.1%;
                                                                                                                                                                                                                                                                                                                                                                                              107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 554.5; 1
Pred. No. 1.8e-
9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.
                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .8e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ∴
                                                                                                                             disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93
       07-JUL-2000; 2000US-021680P-11-JUL-2000; 2000US-0217487P-11-JUL-2000; 2000US-0217496P-14-JUL-2000; 2000US-021963P-26-JUL-2000; 2000US-022963P-26-JUL-2000; 2000US-022963P-14-AUG-2000; 2000US-0225214P-14-AUG-2000; 2000US-0225266P-14-AUG-2000; 2000US-0225266P-14-AUG-2000; 2000US-0225266P-14-AUG-2000; 2000US-0225266P-14-AUG-2000; 2000US-0225279P-14-AUG-2000; 2000US-0225447P-14-AUG-2000; 2000US-022547P-14-AUG-2000; 2000US-022547P-14-AUG-2000; 2000US-022547P-14-AUG-2000; 2000US-0225759P-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-0225759P-19-18-AUG-2000; 2000US-02259345P-19-18-AUG-2000; 2000US-02259345P-19-18-AUG-2000; 2000US-02231414P-19-18-AUG-2000; 2000US-0231444P-19-18-AUG-2000; 2000US-0231444P-19-18-AUG-2000; 2000US-0231444P-19-18-AUG-2000; 2000US-0231444P-19-18-AUG-2000; 2000US-0231444P-19-18-AUG-2000; 2000US-0231444P-19-18-AUG-2000; 2000US-0231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUN-2000;
30-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-APR-2000;
19-MAY-2000;
07-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-MAR-2000;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0179065P.
2000US-0180628P.
2000US-0184664P.
2000US-018350P.
2000US-0189874P.
2000US-0190076P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0214886P.
2000US-0215135P.
2000US-0216647P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0198123P
2000US-0205515P
2000US-0209467P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US001338
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                           Drosophila; developmental biology; cell signalling; insecticide; pharmaceutical.
                                                                                                                                                                                                                                                                           Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                  26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                 ABB60645;
                                                                                                                                                                                                                                                                                                                                                               ABB60645 standard; protein; 443
                                                                                                                                                                                                                                                             WO200171042-A2
                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster polypeptide SEQ ID NO 8727
                                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212 NKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137;
                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                  SEFSHPRELASYIRRLDSD 350
                                                                                                                                                                                                                                                                                                                                                                                                                                              DGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILV
                                                                                                                                                                                                                                                                                                                                                                                                        SEFSHTRELASYIRRLDSE
                                                                                                                                                                                                                                                                                                                                                                                                                                     DGFYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 725; DB 7; Length 148; Pred. No. 3.6e-66; Indels 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                     331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   271
```

MOIL DED TO CALTSION

GPT-TO-COC-ACC-TT-ST

WPI; 23-MAR-2000; 2000US-0191637P. 11-JUL-2000; 2000US-00614150: Venter JC, (PEKE 2001-656860/75. PE Adams M, 다. PWD, Myers EW,

23-MAR-2001; 2001WO-US009231.

New isolated nucleic acid genes from Drosophila and interactions. detection reagent for detecting 1000 or more for elucidating cell signaling and cell-cell

Disclosure; SEQ ID NO 8727; 21pp + Sequence Listing; English.

The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher sukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences The invention signalling and 2.

Ś Matches Query Match Best Local 156; Similarity SFLKKEGLTFNRKRKWELDSYPI-MLWWS-PLTGETGRLGQCGADACFFTINRTYLHHHM 125 Conservative ---27.1%; ; Score 710.5; DB 4; ; Pred. No. 6.3e-64; 81; Mismatches 153; :: Indels 29; Gaps

Length 443;

Seguence 443 AA;

멍 Ş В Ş Ş ş 밁 Ş Q 밁 밁 363 304 257 245 137 368 DIRHYNCPLEPVYAKMEGQKIPQNVAD--WRAAMEVGQCQAKVLDEFFRRDIGFNDAEF 421 197 186 126 TKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSH 185 77 28 NIINYENIKENS------PVELVWWSRDMSWNYDVQRQCGIHTCRITNKRS--RRPW 76 -KGEISNORLLTALRERKWGVODVNOD-NYIDAFECMVCTKVWANIRLQEKGLPPKRWEA 420 LKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKL-TELLIONTESIEVLKSTKATANTÖSKKKTKK-TVELÄKAÖSDCDESDEDSÄKETMIA EDTHISCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEF RRNPISNKKLLHNLVTROYHIGDSSPGASLFEKFECAVCYHVINTAR-----NVKA LIMGVIPIYFGSPTIKDWEPNNKSAIFVNDFQNPQALVEYLNKLADNKKLYNSYRQHKLN LPIDSYGSCLRNRDLPERQXDYLNNLYSPELLRFLSEYKFMIAIENAACPDYITEKFWRP IEVDSYGECTRNKDIPQQLKNPA-SMDADGFYRIIAQYKFILAFENAVCDDYITEKFWRP LPLTTMYLPSGEALTSKDYYVTFDGKSKYGYRPSTSVVFLQSDCDTMSGREDYVKELMKH 196 ARGVLFYGSNIKTGDFPLPRNEHQIWALLHEESPRNTPFVSNKEFLRHFHFTSTFSRYSN 136 . 367 316 303 244 362 256

ABG92064 standard; protein; 168

29-NOV-2002 (first entry)

Human receptors and membrane associated protein REMAP-7.

RESULT 8
ABG99204
AIG 9204
AIG Human; receptor and membrane-associated protein; REMAP; atherosclerosis; cardiovascular disorder; hypertension; congestive heart failure; oedema; aneurysm; angina pectoris; ischaemic heart disease; lung disease; nausea; rheumatic heart disease; chronic obstructive pulmonary disease; nausea; emphysema; bronchitis; gastrointestinal disorder; peptic ulcer; asthma; crohn's disease; lipid metabolism disorder; peptic ulcer; asthma; pancreatitis; diabetes mellitus; hyperlipidaemia; autoimmune disorder; pentratitis; disorder; neurological disorder; creutzfeldt-Jakob disease; cell proliferative disorder; protein replacement therapy; adenocarcinoma; developmental disorder; metabolic disorder; Alzheimer's disease; stroke; parkinson's disease; multiple sclerosis; Cushing's syndrome; arxiety; schizophrenia; Addison's disease; endocrine disorder; gene therapy; gout; amnesia; cancer; leukaemia; lymphoma; myeloma; sarcoma.

Homo sapiens.

WO200263006-A2

15-AUG-2002.

05-FEB-2002; 2002WO-US003868

06-FEB-2001; 2001US-0267201P 16-FEB-2001; 2001US-0269580P 09-APR-2001; 2001US-028679P 02-MAY-2001; 2001US-0288295P 14-JAN-2002; 2002US-0348687P

(INCY-) INCYTE GENOMICS INC.

Swarnakar A, Au-Young J, Raumann BE, Emerling BM, Azimzai Y, Thangavelu 7 Yue H, Ding L, Nguyen DB, Gandhi AR, Burford N;
K, Elliott VS, Ramkumar J, Yao MG, Lal PG, Tang TY;
K, Warren BA, Walia NK, Policky JL, Xu Y, Honchell CD;
Baughn MR, Duggan BM, Lu DAM, Gietzen KJ, Hillmann J
Lu Y, Sapperstein SK, Tran UK, Richardson TW;
Hafalia AJA, Burrill JD, Marcus GA, Zingler KA; JL;

```
cc immunosuppressive, antichtyroid, antilatentic, distributory, discributory, distributory, distributory, distributory, distributory, dermatological, antidiarrheic, vulnerary, haemostatic, virucide, cc dermatological, antidiarrheic, vulnerary, haemostatic, virucide, cc antiboaterial, nootropic, neuroprotective, antiparkinsonian, cc anticonvulsant, analgesic, anorectic, metabolic and immunomodulator cativity. (I) and (II) are useful for treating proliferative and/or cd differentiative disorders of the colon, including adenoma and colorectal carcinogenesis, the liver, including nodular hyperplasia and adenomas, compared to including pepthelial hyperplasia and sclerosing adenomas, compared to including bronchogenic carcinoma and neuroendocrine tumour. The considerative disorders treated also include haematopoietic neeplastic disorders such as acute promyeloid leukaemia, acute myelogenous cleukaemia. (I) and (II) are also useful for treating cardiovascular consenses, disorders of blood vessels, immunological disorders such as color diseases, disorders of color disorders, disorders, disorders, disorders of liver such as disorders color disorders, disorders of liver such as disorders of newstasis, disorders of fibrous tissue, hepatocellular necrosis compostasis, disorders of parain such as intracranial haemorrhage, compostasis, disorders of parain such as intracranial haemorrhage, compositated with accumulation of fibrous as intracranial haemorrhage, accumulation of pain disorders. (I) can be used in gene contributory such as intracranial haemorrhage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           member of the fucosyltransferase family comprising: (a) nucleotide sequence having 80% identity to sequence S1 (ABA0533) or S3 (ABA0533 (b) comprising fragment of S1 or S3; (c) encoding a polypeptide (II) comprising a fully defined sequence S2 (AAM47905) of 492 amino acids its fragment; or (d) encoding naturally occurring allelic variant of (I) has cytostatic, antitumour, antiatherosclerotic, hypotensive, antiatrhythmic, vasotropic, antidiabetic, antiatrhicic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 492
                                       310
                                                                                                                            243
                                                                                                                                                                                                       253
                                                                                                                                                                                                                                                                                           185
                                                                                                                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                                                                                                                                               125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                            PVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQ
                                                                                                                                                                                                  CLRNKDLP-QQLKNPASMDADG--FYRIIAQYKFILAFENAVCDDYITEKFWRPLKLGVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RPGREEAGDLPVLLWWSPGLFPHFPGDSERI-ECARGACVASRNRRALRDSRTRALLFYG
                                                                                                                       CLQNRELPTARLQDTATATTEDPELLAFLSRYKFHLALENAICNDYMTEKLWRPMHLGAV
                                                                                                                                                                                                                                                                                               PGTAYLR -- RPVPPPMERAEWRRRGYAPLLYLQSHCDVPADRDRYVRELMRHIPVDSYGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TDFRASAAPLPRLAHQSWALLHEESPLNNFLLSHGPGIRLFNLTSTFSRHSDYPLSLQWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RKRKWELDSYPIMLWWSP-----LTGETGRLGQCGADACFFTINRTYLHHHMTKAFLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.2%; Score 872; DB 5; 42.6%; Pred. No. 1.5e-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74; Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ABA05334);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                           309
                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
```

```
Tang TY, ame P, Ghosh P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary; antiulcer; osteopachic; immunosuppressive; antiinflammatory; cytostatic; gene therapy; chromosome 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; diagnostic; drug screening; forensics; gene mapping;
biodiversity assessment; Parkinson's disease; Alzheimer's disea
neurodegenerative diseases; anaemia; platelet disorder; wound;
ulcers; osteoporosis; autoimmune disease; cancer;
                                                                                                                                                                                                                                                                                                                                                  Haley-Vicente D,
                                                                                                                                                                                                                                                                                                                                                                                                24-SEP-2001; 2001US-0324631P
                                                                                                                                                                                                                                                                                                                                                                                                               24-SEP-2002; 2002WO-US030474.
                                                                                                                                                                                                                                                                                                                                                                                                                              10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2003029271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                                                            2003-371981/35.
DB; ADC32194.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               novel contig-encoded polypeptide sequence,
                                                                                                                                                                                                                                                                                                                                                                 Zhang J,
                                                                                                                                                                                                                                                                                                                                                  J, Ren F,
Wang D,
Drmanac RJ
                                                                                                                                                                                                                                                                                                                                                   RT;
                                                                                                                                                                                                                                                                                                                                                         Xue AJ, Zhao QA,
Ma Y, Asundi V,
                                                                                                                                                                                                                                                                                                                                                        , Wang J,
Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO:3043
                                                                                                                                                                                                                                                                                                                                                        Weng G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         disease;
```

New polynucleotide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or

ID NO 3043; 1185pp; English.

The invention relates to 971 novel human cDNA sequences (ADC29919-CC invention also relates to nucleic acid sequences (PAC29919-CC invention also relates to nucleic acid sequences over 99t identical with CC the novel human cDNAs. The invention additionally encompasses expression CC vectors and host cells comprising a nucleic acid of the invention; the recombinant production of a polypeptide of the invention; an antibody against a polypeptide of the invention; an antibody CC against a polypeptide of the invention; an antibody CC ambiful antibodies of the invention; and methods of identifying a compound which binds to a polypeptide of the invention. The CC invention further discloses methods of peventing, treating or antibodies candor monoclonal antibodies for carrying out the methods of the contigs (ADC3161-ADC3161-ADC31627) and the polypucleotide and/or polypeptide; and of (ADC31861-ADC31627) and the polypucleotide and/or polypeptide; and the contigs sequences corresponding to the cDNA sequences of the invention of (ADC31861-ADC31627) and the polypeptides encoded by the contigs (ADC32628 case) in diagnostics, drug screening, forensics, gene mapping, in the CC disease and other neurodegenerative and polypeptides of the invention are companied to the retaing diseases such as Barkinson's disease. Alzheimer's CC disease and other neurodegenerative diseases, anaemia, platelet cancer. The nucleic acids may also be used as hybridisation probes or cancer. The nucleic acids may also be used as hybridisation probes or cancer also useful in generating antibodies, as molecular weight markers, cancer also seful in propertide sequence used in an example of the invention. Note: The sequence data for this patent did not form part of the printed cat after this patent did not form part of the printed cat after this patent did not format directly from MPO

RESULT 6
ADC32961
ID ADC3
XX
AC ADC3
XX
AC ADC3
XX

ADC32961 standard;

protein;

148 8

18-DEC-2003

Ş 뫄 5 밁 Ś 밁 Ş 맑 Ś 멼

RLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQE-----KGLPP--KRWEAED 422

PVYRGSPSVRDWMPNNHSVILIDDFESPQKLAEFIDFLDKNDEEYMKYLAYKQPGGITNQ

362

363 370 303

423 423

SHMDCPVPTPGFGNVEEIPENDSWKEMWLQDYWQGLDQGEALTAMIHNNET-EQTKFW 479

THLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW FLLDSLKHREWGVNDPLLPNYLNGFECFVCDYELARLDAEKAHAASPGDSPVFEPHIAQP

08-JUL-2002 (first entry)

ORF3553 protein, SEQ ID NO:7106

Human; ORF; open reading frame; ORFX; drug screening; diagnosis; disease monitoring; cytokine; cell proliferation; cell differentiation; immune modulation; haematopoiesis regulation; tissue growth; angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic; thrombolytic; tumour inhibin; chemotacter; neurological disorder; behaviour; cancer; proliferative disorder; neurological disorder; cardiovascular disease; immune system disorder; organ transplantation; tissue growth disorder; tissue regeneration disorder; diabetes mellitus; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; neuroprotective; antitoprosclerotic; optostatic; nootropic; neuroprotective; antithyroid; antithflammatory; immunomodulator; dermatological; analgesic; virucide; antibacterial; fungicide.

Homo

WO200190366-A2

29-NOV-2001

24-MAY-2001; 2001WO-US017076

24-MAY-2000; 2000US-0206690P

(CURA-) CURAGEN CORP.

Leach 3 Shimkets RA

Novel human polypeptides and polynucleotides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, hyperproliferative disorders and disorders related to organ transplantation.

2508pp; English.

Sequences ABP31028-ABP35561 represent 4534 novel human proteins CC designated ORF (open reading frame) 1-4534, and sequences ABN7504-CC ABN75987 represent cDNAs encoding them: The invention also encompasses CC polypeptides at least 80% identical to the ORF1-ORF4534 (collectively CC referred to as ORFX) proteins, polynuclectides at least 85% identical to the ORF1-ORF4534 (collectively CC referred to as ORFX) proteins, polynuclectides at least 85% identical to the ORFX encompasses of the ORFX uncleic acid sequences, vectors and host cells comprising ORFX polynuclectides, the recombinant production of ORFX proteins, antibodies of specific for ORFX proteins, methods of detecting ORFX polynuclectides and polypuppides, methods of screening for modulators of ORFX expression or comprising or modulators of ORFX expression or comparation, and methods of screening for modulators of ORFX expression or comparation, industry and as cytokine, cell proliferation, cell differentiation, immune modulation, haematopoiesis regulation, cell proliferation, cell differentiation, immune modulation, haematopoiesis regulation, cell proliferation, cell pro

Ş 밁 Ş 뮹 8 밁 S Best Loc Matches Query Match protein, and in drug screening. The ORFX proteins may also be used immunogens to generate specific antibodies, which are useful in the diagnosis, treatment and monitoring of ORFX-associated diseases Sequence 197 AA; 193; 123 219 183 63 w Similarity ELASYIRRLDSDDRL ELASYIRRLDSDDRL AQYKFILAFENAVCDDCITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPR AQYKFILAFENAVCDDYITEKFWRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPR APLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRII APLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNXDLPQQLKNPASMDADGFYRII PENNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRL PKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRL Conservative 38.7%; 353 Score 1015; DB 5; Pred. No. 6.2e-96; Mismatches <u>ა</u> 0 as 338 122 9

AAM47905 standard; (first entry) protein; 492

Human fucosyltransferase family member 32132.

antiatherosclerotic; hypotensive; antiarrhythmic; vasotropic; antiatherosclerotic; hypotensive; antiatrhythmic; vasotropic; antiatheroid; antiulcer; antiaflammatory; ophthalmological; antiallergic; antiasthmatic; nephrotrophic; dermatological; antidiarrheic; vulnerary; haemostatic; virucide; antibaterial; mostropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic; anorectic; metabolic; immunomodulator; prolifferation; differentiation; cancer; apoptosis; leukaemia; arthritis; cardiovascular disease; diabetes mellitus; ulcerative colitis; Crohn's disease; glomerulonephritis; hepatocellular necrosis; homeostasis; meningitis; multiple sclerosis; pain; gene therapy. Human; fucosyltransferase family member 32132; cytostatic; antitumour;

Homo sapiens.

27-APR-2001; 2001WO-US013805

28-APR-2000; 2000US-0200604P

(MILL-) MILLENNIUM PHARM INC

RΑ, Williamson 3

WPI; 2002-041492/05

N-PSDB; ABA05333, ABA05334.

Novel isolated 32132 nucleic acid encoding 32132 polypeptide, a novel member of fucosyltransferase family, useful for treating atherosclerosis, multiple sclerosis, acute glomerulonephritis, Raynaud's disease, pain.

Claim 9; Page 107; 125pp; English

The invention relates ç an isolated 32132 nucleic acid (I),

```
Š
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                B,
                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity Matches 453; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or cancer. The nucleic acids may also be used as hybridisation probes or primers, and in the recombinant production of a protein. The polypeptides are also useful in generating antibodies, as molecular weight markers, and as food supplements. The present sequence represents a specifically claimed human polypeptide sequence of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                Human; secreted protein; gene therapy; vaccine; treatment; diagnosis; GENSET.
08-DEC-1999; 99US-0169629P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 546
                        07-DEC-2000; 2000WO-IB001938
                                                           WO200142451-A2
                                                                              Homo sapiens
                                                                                                                            Human secreted
                                                                                                                                             11-SEP-2001
                                                                                                                                                                                 AAG89164 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                              513
                                                                                                                                                                                                                                               453
                                                                                                                                                                                                                                                                  453
                                                                                                                                                                                                                                                                                   393
                                                                                                                                                                                                                                                                                                      393
                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                                         333
                                                                                                                                                                                                                                                                                                                                                           273
                                                                                                                                                                                                                                                                                                                                                                             273
                                                                                                                                                                                                                                                                                                                                                                                               213
                                                                                                                                                                                                                                                                                                                                                                                                                 213
                                                                                                                                                                                                                                                                                                                                                                                                                                   153
                                                                                                                                                                                                                                                                                                                                                                                                                                                      153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93
                                                                                                                                                                                                                                                                                                                                         WWSPLTGETGRLGOCGADACFFTINRTYLHHHMTKAFLFYGTDFNIDSLFLPRKAHHDWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SFEQSKKEAQALRWLVDRNQNFSSQEFWGLVFKD 486
                                                                                                                                                                                                                                                                             AFECMVCTKVWANIRLQEKGLPPKRWEAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWIS
                                                                                                                                                                                                                                                                                                     EFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYID
                                                                                                                                                                                                                                                                                                                                                                                      KLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDAD
                                                                                                                                                                                                                                                                                                                                                                                                                 VFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKN
                                                                                                                                                                                                                                                                                                                                                                                                                          VFHEESPKNIYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVLKSLRYLVPLQSKN
                                                                                                                                                                                                                              SFEQSKKEAQALRWLVDRNQNFSSQEFWGLVFKD 546
                                                                                                                                                                                                                                                                  AFECMVCTKVWANIRLQEKGLPPKRWEAEDTHLSCPEPTVFAFSPLRTPPLSSLREMWIS
                                                                                                                                                                                                                                                                                                                       EFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALRERKWGVQDVNQDNYID
                                                                                                                                                                                                                                                                                                                                                                              KLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYTEVDSYGECLRNKDLPQQLKNPASMDAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93.0%;
nilarity 99.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                            (first
                                                                                                                           protein,
                                                                                                                                                                                 protein;
                                                                                                                                            entry)
                                                                                                                            SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 2442; DB 7;
Pred. No. 1.2e-242;
O; Mismatches 1;
                                                                                                                                                                                  406
                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152
                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                                      452
                                                                                                                                                                                                                                                                                                                        392
                                                                                                                                                                                                                                                                                                                                          392
                                                                                                                                                                                                                                                                                                                                                                                                272
                                                                                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          152
                                                                                                                                                                                                                                                                   512
                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                              332
                                                                                                                                                                                                                                                                                                                                                                                                                  272
                                                                                                                                                                                                                                                                                                                                                                                                                                                      212
RESULT 4
ABP34580
ID ABP3
XX
AC ABP3
                                                                             S
                                                                                                유
                                                                                                                               밁
                                                                                                                                                Ş
                                                                                                                                                                    밁
                                                                                                                                                                                        Š
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                  Ś
ABP34580;
                ABP34580 standard;
                                                                                                                                                                                                                                                                                                                                                            Sequence 406
```

Ä

```
CT The invention relates to full length GENSET human nucleic acids encoding potentially secreted proteins. The nucleic acids and the polypeptides ct they encode may be used in the prevention, treatment and diagnosis of the year code with inappropriate GENSET gene expression. For cc example, they be used to treat disorders associated with decreased GENSET cc gene expression by rectifying mutations or deletions in a patient's gene expression by rectifying mutations or deletions in a patient's cc genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense cc patients own production of GENSET polypeptides. Conversely, antisense cc patients own production of GENSET polypeptides. Conversely, antisense cc expression by binding with the cells' own genes and preventing their expression. The sense and antisense nucleic acids may also be used as DNA cc probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy. The GENSET polypeptides condentify modulators (agonists and antagonists) of GENSET polypeptide of the production and activity. The present sequence is a GENSET polypeptide of the production and activity. The present sequence is a GENSET polypeptide of the production and activity. The present sequence is a GENSET polypeptide of the production of antipolicies and in assays to determine who is a GENSET polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety of diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 21; Page 819-820;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           921pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bougueleret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŗ
```

Query Match Best Local S Matches 366 396 361 301 276 216 181 156 121 366; 96 61 36 μ Similarity 97.9 66; Conservative LMTYIEVDSYGECLRNKDLFQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF 300 LHH:MTKAFLFYGTDFNIDSLPLPRKAH:HDWAVFHEESPKWWYKLFHKPVITLFWYTATF KLKG-----RSLTS KLKGEISNORLLTA WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKKLAPLVYVQSYCDPPSDRDSYVRE SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE LHHHMTKAFLFYGTDENIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME MXVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME 74.6%; 404 374 ٠. Score 1957.5; DB 4; Pred. No. 8.4e-193; 1; Mismatches 2; indels Length 406; ຫ **`**• Gaps 240

215 180 155 120

95

protein;

197

B

Glucksmann MA,

2002-463309/49.

Novel 80090, 52874, 52880, 63497, and 33425 polynucleotides for preventing or treating e.g. camcer, cardiovascular, hematopoietic

ç

Claim 4; Fig 1; 184pp; English.

CC fucosyl transferase, seven transmembrane receptor, or Rho GTPaseCC activating protein (RhoGAP) family members. The DNA and protein sequences
CC of the invention are useful for identifying a compound capable of
CC treating a disorder by aberrant expression of the mucleic acid or the
CC activity of the protein, in evaluating the efficacy of treatments and in
CC diagnosis. The invention also comprises a method for tracating a disorder
CC treating breast, ovarian, prostate, colon, or lung cancer, heart,
CC cardiovascular (including endothelial cell), haematopoieteic, blood
CC wessel and brain disorders. It is also useful in treating pain and
CC metabolic disorders, liver disorders and platelet disorders. The DNA and
CC protein sequences are also useful in treating pain and
CC e.g. acute leukaemia), cardiovascular disorders (e.g. cardiac
CC hypertrophy, myocardial infarction, rheumatic fever), endothelial cell
CC diesorders (e.g. psoriasis, Grave's disease, rheumatoid arthritis),
CC degenerative disorders (e.g. diabetes mellitus, multiple sclerosis,
CC crohn's disease, asthma), blood vessel disorders (e.g. Kaposi sarcoma),
CC degenerative disorders (e.g. Alabeimer disease), and hormonal disorders.
CC The sequences of the invention are also useful as query sequences to
CC dientify other family members or related sequences. The present sequence
CC represents the human 80090 protein of the invention polynucleotides 80090, to the DNA and protein sequences of novel isolated 52874, 52880, 63497, or 33425 encoding novel

486 ĀΑ;

Query Match

Length 486;

S В Š B Ś 멍 Š 밁 8 B Ş 片 Š 片 Local 361 301 181 181 421 301 241 121 121 484; 61 61 Ь Similarity EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSPLTGETGRLGQCGADACFFTINRTY KLKGEISNQRILTALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPKRWEA 420 WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW LMTYIEVDSYGECLRNXDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE 240 LHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME MKVTGPPQGVTDSMQCFNDQWPLSNTRSSEHIKEVMVELGKFERKEFKSSSLQDGHTKME WRPLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEW LITYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKF SRHSHLPLTTQYLESIEVLKSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRE LHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATF EAPTHLNSFLKKEGLTFNRKRKWELDSYPIMLWWSLLTGETGRLGQCGADACFFTINRTY EDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW EDTHLSCPEPTVFAFSPLRTPPLSSLREMWISSFEQSKKEAQALRWLVDRNQNFSSQEFW Conservative 99.5%; μ; Score 2611; DB 5; Pred. No. 3.5e-260; 1; Mismatches 1; Indels 0; 480 60 420 240

ADC312T7 2
ADC312T7 2
ADC312T7 2
ADC312T7 2
ADC32T7 2
AD 밁 õ ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic; Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet disorder; wound; bur gene therapy; chromosome 8. ADC31278 10-APR-2003 WO2003029271-A2 Human novel polypeptide sequence, SEQ Homo sapiens. 481 481 GLVFKD standard; protein; 546 GLVFKD 486 (first entry) 486 ID NO:1360. burns;

24-SEP-2002; 2002WO-US030474.

24-SEP-2001; 2001US-0324631P

(HYSE-) HYSEQ INC.

Haley-Vicente D, Zhou TY, Zhang J, P, Ghosh M, Drmanac RT; Wang D, Xue AJ, Ma Y, 1 , Zhao QA, Asundi V, Wang Z, Wang ٦

WPI; 2003-371981/35. N-PSDB; ADC30307.

New polynucleotide and polypeptide useful for diagnosing, preventing or treating conditions such as neurodegenerative diseases, anemias, platelet disorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or

SEQ ID NO 1360; 1185pp; English

The invention relates to 971 novel human cDNA sequences (ADC29919-CC ADC30889) and the polypeptides they encode (ADC30890-ADC31860). The clivention also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression expression of a polypeptide of the invention; the invention; and methods of the invention; and methods of against a polypeptide of the invention; and methods of clientifying a compound which binds to a polypeptide of the invention. The clientifying a compound which binds to a polypeptide of the invention. The clientifying a methods of peventing, treating or cameliorating a methods of peventing, treating or cameliorating a methods of peventing, treating or cand/or monoclonal antibodies for carrying out the methods of the conversion or activity of the polymucleotide and/or polypeptide; and 767 contig sequences corresponding to the cDNA sequences of the invention are useful in diagnostics, drug screening, forensics, gene mapping, in the clientification of mutations responsible for genetic disorders or other types of data and products dependent on DNA and amino acid sequences. They are confidenced and for treating diseases such as Barkinson's disease, Alzheimer's diseases and other tration.

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                         Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                  Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run
                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
9
1:
                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
2611
1957.4
1015
1015
1015
70.5
554.5
554.5
521
487.5
279.5
279.5
279.5
266
263
263
263
258.5
                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-080-960-2
2625
1 MKVTGPPQGVTDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 September 9, 2004, 21:30:50; Search time 127 Seconds (without alignments) 1081.245 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                          1586107 seqs, 282547505 residues
 MKVTGPPQGVTDSMQCFNDQ.....LVDRNQNFSSQEFWGLVFKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                                         Length
 GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd
                                                                                                                                                                                                         DB
 AAU31278
ABC31278
AAC89164
ABC34580
AAW147905
ADC32961
ABB602664
ABB603263
ABB603263
ABB03263
ABB03263
ABB012557
AAU77731
AAU23474
AAU414523
AAW14523
AAW14523
AAW14523
AAW14523
AAW14523
AAW14523
                                                                                                                                                                                                                                  SUMMARIES
Adu31278

Aag89164

Aag89168

Aag89168

Abp34580

Adam47905

Adc32961

Abb03263

Abb03263

Abb03263

Abu17257

Abu17257

Aau1757

Aau17457

Aau23474

Abu23474

Abu445295

Aay80996

Aay80996
                                                                                                                                                                                                         Description
Human 800
Human novc
Human or
Human or
Human or
Human or
Drosophil
Human rec
Human rec
Human rec
Human movel
Human movel hum
Novel hum
Horsophil
Human chi
20-OCT-2000; 2000US-0241992P.
20-OCT-2000; 2000US-0242049P.
20-OCT-2000; 2000US-0242040P.
23-OCT-2000; 2000US-0242637P.
                                                         19-OCT-2001; 2001WO-US048307.
                                                                                                                                                                                                                                                                                                                 Human 80090 protein.
                                                                                                                                                                                                                                                                                                                                                                 AAU97908 standard; protein; 486 AA
                                                                          25-APR-2002.
                                                                                          WO200232962-A2
                                                                                                                                 Domain
                                                                                                                                                 Domain
                                                                                                                                                                 Domain
                                                                                                                                                                                 Domain
                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                 13-AUG-2002 (first entry)
  (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                  Domain
                                                                                                                                                 /note=
                                                                                                                                       90. .390
/note= "CG9169
                                                                                                                                                                                                  .305
```

ť	45	44	43	42	41	40	39	₩ 8	37	36	ω 5	<u>د</u>	ω W	32	31	30	29	28	27	26
		•	239.5	•	•	•	240.5		243	244	244	244.5	245.5	Δ	247.5	248	251	251.5	54.	255
	٥	9.1	9.1	•							9.3									
6	196	361	361	361	361	361	361	361	360	360	350	361	374	374	361	360	360	360	360	359
t	v	4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Ν
	AAW14518	AAG64452	AAW13638	AAW23806	AAR45934	AAR13749	AAW14517	AAW14527	AAW14526	AAW14516	AAW14532	AAW14530	AAW13642	AAR45939	AAW14520	AAW14515	AAW14514	AAW14512	AAW14513	AAW14525
	Aaw14518	Aag64452	Aaw13638	Aaw23806	Aar45934	Aar13749	Aaw14517	Aaw14527	Aaw14526	Aaw14516	Aaw14532	Aaw14530	Aaw13642		Aaw14520	Aaw14515	Aaw14514	Aaw14512	Aaw14513	Aaw14525
	Human chi	Human Lew	Human alp	Human alp	A glycosy	GDP-Fuc:[Human chi	Human alp	A glycosy	Human chi										

ALIGNMENTS

```
Human; 80090; fucosyl transferase; cancer; Grave's disease; seven transmembrane receptor; Rho Grpase-activating protein; RhoGAP; cardiovascular disorder; haematopoieteic disorder; brain disorder; blood vessel disorder; metabolic disorder; liver disorder; psoriasis; platelet disorder; leukaemia; cardiac hypertrophy; Crohm's disease; myocardial infarction; rheumatic fever; multiple sclerosis; asthma; rheumatod arthritis; diabetes mellitus; blood vessel disorder; Kaposi sarcoma; Alzheimer's disease; hormonal disorder.
```

```
221. .367
/note= "Transferase fucosyltransferase
glycosyltransferase alpha-12-fucosyltransferase
galactosidase domain"
                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                 /note= "fucosyltransferase domain"
                                                                                                                                                                                                                                                                    note= "N terminal cytoplasmic domain"
```

	Search completed: September 9, 2004, 21:54:39 Job time : 36 secs	Searc Job t
	333 FRWRETLRPRSFSWALAF-CKACWKLQQESRYQ 364	ďď,
,	358 VEWKLKGEISNQRLITALRERKWGVQDVNQDNYIDAFECMVCTKVWANIRLQ 409	ş
132	275 KNALEAWAVPVVLG-PSKSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY 332	Db
157	302 R-PLKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357	Q
174	227 QAHLKUDVYGRSHKPLPKGTMMETLSRYKFYLAFENSLHPDYITEKLW 274	ф
101	242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301	Ş
26	173 RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTELVAWAVSNWKPDSARVRYYQSL 226	Db

•;

215

319

```
DЬ
                                                                     Ś
                                                                                                            В
                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
US-09-092-315-12
                                                                                                                                                                                                                                                             US-09-092-315-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-390-131-3
                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 12
LENGTH: 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12, Application US/09092315
Patent No. 6399337
GENERAL INFORMATION:
                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Taylor, Diane E.
APPLICANT: Ge, Zhongming
TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRAI
FILE REFERENCE: 07254/049001
CURRENT APPLICATION NUMBER: US/09/092,315
CURRENT FILING DATE: 1998-06-05
EARLIER APPLICATION NUMBER: US 60/048,857
EARLIER FILING DATE: 1997-06-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Gallus gallus
                                                                                                                                                                                / Match 9.6%; Score 251; DB 4; Length 356; Local Similarity 25.8%; Pred. No. 1.3e-17; ndels 84; Conservative 50; Mismatches 132; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
200
                                   116
                                                                         142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           106 KEPFDVEEVLTSSDIKLEERMTATVIPGQKRLILSWNAGHSQDNLQG-CPDWNCEFTQVR 164
                                                                                                            59
                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35 VMVELGKFERKEFKSSS-------LQDGHTKMEEAPTHLNSFLKKEGLTENRKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NSKREDFVKKLQKHLQIDIYGGCGPMKCARGDSKCDTMLDTD-----YHFYVTFENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IYAPISKSEQKDWKEGEIELSNDHELDVPILQKBELKPQQRPSFEENVPKKKTFNFNPVG 105
                                   RGPPPRPPRQRWVWMNFESPSHSPGL---RGLAGLFNWTMSYRRDSDVFVPYGYL-----
                                                                     --PLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQYLESIEVL
                                                                                                            VLLWWEPF-GRPWRPADCRRRYNITGCLLSADRG--RYGEARAVLPHHRDLALHGROGLP
                                                                                                                                              IMLWWSPLTGETGRLGQC----GADACFFTINRTYLHHHMTKAFLFYGTDFNIDSL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EPR--QKVLIP-NWDA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIRLQEKGLPPKRWEA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NKTAYMEYFEWRHDYKVVFLDGSHHDVL----ERPWGF--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VCDDYITEKFWRP-LKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHPRELASYIRRLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PSDRDSYVRELMTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENA 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ARAPDADAVLIAHMDN-----DFVPKP----NQYVVYFSQESPANSGIQIPRP-
KSLRYLVPLQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVRELMTYIEVDSYGECLRNKDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DDRLYEAYVEWKLKGEI-----SNQRLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWA 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITLENYTATESRHSHLELTTQYLESIEVLKSLRYLVELQSKNKLRKRLAPLVYVQSDCDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----TYLHHHMTKAFLFYGTDFNIDSLFLFRKAHHDWAV-FHEESFKNNYKLFHKFV 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ICEDYVTEKLWKSGYQNTIIPLVLKRKLVEPFVPPN-SFIAIDDFKSVKEMGDYLNYLMN 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -DYINMTLGF-RHD-TPAGSPYGYTVKLGAKSRKTGQVVDANLVNGKAKGAAWFVSHCQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.7%; Score 255.5; DB 4; 22.7%; Pred. No. 6.5e-18; tive 65; Mismatches 173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3-FUCOSYLTRANFERASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----LWWSPLTGETGRLGQCGADACFFTINR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                    60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CQVCRMAWT 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                    Gaps
                                                                         199
                                                                                                            115
                                                                                                                                                141
                                   167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        208
                                                                   Ş
                                                                                                          В
                               B
                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                             US-07-914-281-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-07-914-281-11
                                                                                                                                                                                    Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (703)486-234;
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: (
TITLE OF INVENTION: (
TITLE OF INVENTION: (
                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Lavalleye, Jean-Paul M.
REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 2363.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.
ZIP: 22202
                                                                                                                                                                                                                                                                                             LENGTH: 374 amino acids
TYPE: AMINO ACID
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 1755 Jet
CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (703) 486-2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US FILING DATE: 19920720 CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: OBLON, SPIVAK, MCCLELLAND,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11, ***
**^ 5324663
                                                                       138 IDSLPLPKKAHHDWAVFHEESPKWNYKLFHKPVITLFNYTATFSRH-----SHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168
                                                                                                            78 ILLWTWPFNTPVA-LPRCSEMVPGAADCNITADSSVYPQADAVIVHHWD---IMYNPSAN 133
                                                                                                                                              90 IMLWWSPLTGETGRLGQC-----GADACFFTINRT-----YLHHHMTKAFLFYGTDFN 137
                                                                                                                                                                                                    Similarity
LESIEVLKSLRYLVP--
                                   LP--PPTRPQGQRWIWFSMESPSN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ERKWGVQDVNQDNYIDAFECMVCTKV 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NYERFIPAD-SFIHVDDFPSFRLLATYLKFLDKNKPSYRRYFAWRNKYE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEISNQRLLTALR 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGVVPVYYG--SP 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----YEPPSPRPFVLPRKSRLVAWVISNWNBEHARVRYYRQLKEHLPIDVYG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---ARGMALLEG-SVVKTVSAYKFYLAFENSQHTDYITEKLWKNAFAASAVPVVLGPRRA 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/07914281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1: P.C.
1755 Jefferson Davis Highway,
                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOWE, JOHN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                 (703)521-4500
                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -VHVTSFWDEHYCKVCEAV 337
                                                                                                                                                                                  9.4%; Score 245.5; DB 1;
26.6%; Pred. No. 5.4e-17;
ative 42; Mismatches 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 METHODS AND PRODUCTS FOR THE SYNTHESIS

OF OLIGOSACCHARIDE STRUCTURES ON GLYCOPROTEINS,
OR AS FREE MOLECULES, AND FOR THE ISOLATION
OF CLONED GENETIC SEQUENCES THAT DETERMINE THESE STRUCTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/07/914,281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2363-060-55
-----LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fourth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floor
                                                                                                                                                                                    Indels 101;
                                                                                                                                                                                                                     Length 374;
                                   -CRHLEALDGYFNLTMSY 172
                                                                                                                                                                                    Gaps
```

19;

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-09-390-131-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           岁
; Sequence 9, Application US/09390131
; Patent No. 6461835
; GENERAL INFORMATION:
; APPLICANT: Abbott Laboratories
; APPLICANT: Cummings, Richard D.
; APPLICANT: Nyame, A. Kwame
                                                                                                                                RESULT 12
US-09-390-131-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-390-131-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 8, Application US/09390131
Patent No. 6461835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Abbott Laboratories
APPLICANT: Cummings, Richard D.
APPLICANT: Nyame, A. Kwame
APPLICANT: DeBose-Boyd, Russell A.
TITLE OF INVENTION: FUCOSYLTRANSFERASES, POLYNUCLEOTIDES
TITLE OF INVENTION: ENCODING FUCOSYLTRANSFERASES, AND TRA
TITLE OF INVENTION: INCORPORATING SAME
FILE REFERENCE: 6679.US.01
CURRENT APPLICATION NUMBER: US/09/390,131
CURRENT APPLICATION NUMBER: US/09/390,131
CURRENT FILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 22
NUMBER OF SEQ ID NOS: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT ORGANISM: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH: 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           319 FRWR------ETLRPRSFSWAL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         107 -LHGRQ-GLPRGPPPRPPRQRWVWMNFESPSHSPGL--RGLAGLFNWTMSYRRDSDVFVP 162
                                                                                                                                                                                                                                                                417
                                                                                                                                                                                                                                                                                                                                                                                                261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                190
                                                                                                                                                                                                                         372 NWDA 375
                                                                                                                                                                                                                                                                                                                                                    367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90 IMLWWSP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LFYGTDFNIDSLPLPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VLIWWEPFGRPWRPADCRRRYNITGCLLSADRGRYGEA-----RAVLFHHRDLA- 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGL 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY
                                                                                                                                                                                                                                                                                                           H----VTSFWDEHYCKVCEAVRTAGNQLKTVQNLAGWFE-SVCRMAWTEPR--QKVLIP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YGYL-----YEPPSPRPFVLPRKSRLVAWVISNWNEEHARVRYYRQLKEHLPIDV 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOYLESIEVLKSLRYLVPLOSKNKLRKRLAPLVYVOSDCDPPSDRDSYVRELMTYIEVDS 249
                                                                                                                                                                                                                                                                RWEA 420
                                                                                                                                                                                                                                                                                                                                                    SNORLLTALRE------RKWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGLPPK 416
                                                                                                                                                                                                                                                                                                                                                                                                VPVVLGPRRANYERFIPAD-SFIHVDDFPSPRLLATYLKFLDKNKPSYRRYFAMRNKYEV 319
                                                                                                                                                                                                                                                                                                                                                                                                                                         VPVYYG--SPSITDWLPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAYVEWKLKGEI 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFWR-PLKLGV 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YG-----ARGMALLEG-SVVKTVSAYKFYLAFENSQHTDYITEKLMKNAFAASA 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9.7%; Score 255.5; DB 4;
26.1%; Pred. No. 5.2e-18;
tive 52; Mismatches 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----LTGETGRLGQCGADACFFTINRTYLHHHMTKAF 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSGENIC MAMMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

```
; LENGTH: 450
; TYPE: PRT
; ORGANIAM: Caenorhabditis elegans
US-09-390-131-9
                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
US-09-390-131-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: DeBose-Boyd, Russell A.

TITLE OF INVENTION: FUCOSYLTRANSFERASES, POLYNUCLEOTIDES
TITLE OF INVENTION: ENCODING FUCOSYLTRANSFERASES, AND TRANSGENIC MAMMAL
TITLE OF INVENTION: INCORPORATING SAME
FILE REFERENCE: 6679,US.01
CURRENT APPLICATION NUMBER: US/09/390,131
CURRENT APPLICATION NUMBER: US/09/390,131
CURRENT FILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Abbott
APPLICANT: Cumming
                                                                                                                                                                                                                                                                                                                                                                   sequence 3, Application US/09390131
Patent No. 6461835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                             SCFTWARE: FastSEQ for Windows Version SEQ ID NO \scriptstyle 3
                                                                                                                                                                                         APPLICANT: Abbott Laboratories
APPLICANT: Cummings, Richard D.
APPLICANT: Nyame, A. Kwame
APPLICANT: Nyame, A. Kwame
TITLE OF INVENTION: FUCOSYLIRANSFERASES, POLYNUCLECTIDES
TITLE OF INVENTION: ENCORPORATING SAME
TITLE OF INVENTION: INCORPORATING SAME
                                                                                                     CURRENT APPLICATION NUMBER: US/09/390,131
CURRENT FILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 22
                                                                                                                                                                         FILE REFERENCE:
ORGANISM: Caenorhabditis
                LENGTH: 451
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 9.7%;
Local Similarity 22.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318 ICEDYVTEKLWKSGYQNTIIPLVLKRKLVEPFVPPN-SFIAIDDFKSVKEMGDYLNYLMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291 VCDDYITEKFWRP-LKLGVVPVYYGSPSITDWLPSNKSAILVSEFSHFRELASYIRRLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 266 NSKREDFYKKLQKHLQIDIYGGCGPMKCARGDSKCDTMLDTD-----YHFYYTFENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231 PSDRDSYVRELMIYIEVDSYGEÇLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENA 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165 ARAPDADAVLIAHMDN-----DFVPKP----NQYVVYFSQESPANSGIQIPRP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420 EPR--QKVLIP-NWDA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405 NIRLQEKGLPPKRWEA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35 VMVELGKFERKEFKSSS-------LQDGHTKMEEAPTHLNSFLKKEGLTFNRKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NKTAYMEYFEWRHDYKVVFLDGSHHDVL----ERPWGF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DDRLYEAYVEWKLKGEI-----SNQRLLTALRERKWGVQDVNQDNYIDAFECMVCTKVWA 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -DYINMILGE-RHD-TPAGSPYGYTVKLGAKSRKTGQVVDANLVNGKAKGAAWEVSHCQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ITLFNYTATESRHSHLELTTQYLESIEVLKSLRYLVELQSKNKLRKRLAPLVYVQSDCDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----TYLHHHMTKAFLFYGTDFNIDSLPLPRKAHHDWAV-FHEESPKNNYKLFHKPV 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEPFDVEEVLTSSDIKLEERMTATVIPGOKRLILSWNAGHSODNLOG-CPDWNCEFTOVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KWELDSYPIM-----------LWWSPLTGETGRLGQCGADACFFTINR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IYAPISKSEQKDWKEGEIELSNDHELDVPILQKEELKPQQRPSFEENVPKKKTFNFNPVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                           6679.US.O1
elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 255.5; DB 4; Length 450; pred. No. 6.5e-18; 65; Mismatches 173; Indels 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -CQVCRMAWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
```

```
GENERAL INFORMATION:
APPLICANT: TayLor, Diane E.
APPLICANT: Ge, Zhongming
ITILE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFE
FILE REFERENCE: 07254/049001
CURRENT APPLICATION NUMBER: US/09/092,315
CURRENT TILING DATE: 1998-06-05
EARLIER FILING DATE: 1997-06-06
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 359
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                        US-09-092-315-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Lavalleye, Jean-Paul M. P.
REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 2363-06
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)521-4500
TELEPAX: (703)466-2347
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/09092315
Patent No. 6399337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 98; Conserv
Query Match
                                  09-092-315-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 08/220,433
FILING DATE: 30-MAR-1994
APPLICATION NUMBER: US 07/914,281
FILING DATE: 20-UUL-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116
                                                                                                                                                                                                                                                                                                                                                                                                                                  319 FRWR------ETLRPRSFSWAL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 358 VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLOEKGL 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              213 QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       193 LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134 TDFNIDSLP-LPRKAHHDWAVFHEESPKWNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4: 359 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNALEAWAVPVVLG-PSRSNYERFLPPD-AFTHVDDFQSPKDLARYLQELDKDHARYLSY 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL-----VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN-----LTMSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIPLILLWTWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10.0%; Score 263; DB 3; 1 larity 27.4%; Pred. No. 7.4e-19; Conservative 48; Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
10.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/393,246
                                                                                                                                                                                                                                                  3-FUCOSYLTRANFERASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2363-060-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   שי
263;
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                  ----AF-CKACWKLQEESRYQTRGI 354
4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                       밁
                                          Ş
                                                                                    밁
                                                                                                                  Ş
                                                                                                                                                                                       Ş
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-733-524A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-733-524A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 359
                 213
                                               242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW
                                                                                                                          193
                                                                                                                                                          116 PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      319 FRWR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        159
                                                                                                                                                                                                                               60 SIPLILLWTWPFNKPIALPRCSEMVPGTADCNITADRKVYPQADAVIVHHRB----VMYN 115
                                                                                                                                                                                                                                                                  87 SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG 133
                                                                                                                                                                                                                                                                                                      98;
               QAHLKVDVYGR - - SHKPLPQ - - -
                                                                                                                                                                                           TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKPVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                        LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL
                                                                                    RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL----VAWAVSNWGPNSARVRYYQSL
                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
```

Score

Length 359

-GIMMETLSRYKFYLAFENSLHPDYITEKLW

301 212 241 158

260

94;

Gaps

19;

YSML7

```
Best Local Similarity 27.4%;
                                                                                                                                                                                                                                                                                                                                                                      242 MTYIEVDSYGECLRNKDLPQQLKNPASMDADGFYRIIAQYKFILAFENAVCDDYITEKFW 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      134 TDFNIDSLP-LPRKAHHDWAVFHEESPKNNYKLFHKFVITLFNYTATFSRHSHLPLTTQY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60 SIPLILLWIWDFNKPIALPRCSENVPGTADCNITADRKVYPQADAVIVHHRE----VMYN 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87 SYPIMLWWSPLTGETGRLGQC-----GADACFFTINR-----TYLHHHMTKAFLFYG 133
                                                                      VEWKLKGEISNORLLTALRER--KWGVQDVNQDNYIDAFECMVCTKVWANIRLQEKGL 413
                                                                                                                                             RNALEAWAVPVVLG-PSRSNYERFLPPD-AFIHVDDFQSPKDLARYLQELDKDHARYLSY 318
                                                                                                                                                                                                                    R-PLKLGVVPVYYGSPSITDW---LPSNKSAILVSEFSHPRELASYIRRLDSDDRLYEAY 357
                                                                                                                                                                                                                                                                                                   QAHLKVDVYGR--SHKPLPQ------GTMMETLSRYKFYLAFENSLHPDYITEKLW 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RSDSDIFTPYGWLEPWSGQPAHPPLNLSAKTEL----VAWAVSNWGPNSARVRYYQSL 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LESIEVLKSLRYLVP------LQSKNKLRKRLAPLVYVQSDCDPPSDRDSYVREL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS---AQLPRSPRRQGQRWIWFSMESPSHCWQL--KAMDGYFN--
--ETLRPRSFSWAL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 7.4e-19;
8; Mismatches 118
-AF-CKACWKLQEESRYQTRGI 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----LTMSY 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

CURRENT APPLICATION NUMBER: US/09/733,524A
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: US 09/092,315
PRIOR FILING DATE: 1998-06-05
PRIOR APPLICATION NUMBER: US 60/048,857
PRIOR PILING DATE: 1997-06-06
NUMBER OF SEQ ID NOS: 27
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 10 GENERAL INFORMATION:
APPLICANT: Taylor, Diane E.
APPLICANT: Ge, Zhongming
APPLICANT: Ge, Zhongming
TITLE OF INVENTION: NUCLEIC ACIDS ENCODING ALPHA-1,3
TITLE OF INVENTION: EYCCOSYLTRANSFERASES AND EXPRESSION SYSTEMS FOR MAKING AND TITLE OF INVENTION: EXPRESSING THEM (amended)
FILE REFERENCE: 07254-049002 Sequence 10, Application US/09733524A Patent No. 6534298 10.0%; Score 263; DB 4; Length 359; 27.4%; Pred No. 7.4e-19; 48; Mismatches 118;